





A direct impact on the species is not expected for the South Fork Santa Clara River because the pipeline would be installed in a closed girder bridge. The pipelines at the Santa Clara River and San Francisquito Creek crossings would be installed in the open girder bridges.

The remaining water crossings would be trenched, and a tributary to the South Fork Santa Clara River would be crossed using a slick bore. The use of the slick bore would not require the use of any drilling fluids, thereby avoiding any sedimentation, turbidity, or erosion impacts within the bed and bank of the drainage.

The Applicant would be required to implement a number of erosion control measures and develop a spill containment/management program, as well as follow the Applicant and mitigation measures identified in Section 4.8.4—specifically AM TerrBio-2b, AM TerrBio-2c, AM TerrBio-2d, MM TerrBio-5a, MM WAT-3a, AM WAT-6b, MM TerrBio-1b, and AM TerrBio-1a. The Applicant would also be required to have construction monitors and fish handlers to remove fish within the construction area and/or deter fish from the area by diverting water or installing blocking nets. Therefore, with implementation of the above measures, the proposed Project may affect but would not likely adversely affect this species.

Arroyo Toad (*Bufo californicus*) – Federal Endangered

Although full USFWS survey protocols could not be met in the June/July 2005 survey, sufficient data were gathered to delineate the species' habitat and to determine its potential presence in the ROW. The arroyo toad is known to occur within side canyon tributaries that flow into the Santa Clara River. Known populations have been detected upstream of the ROW. The arroyo toad has also been observed west of the confluence of San Francisquito Creek and the Santa Clara River (Newhall Ranch Project). An individual has been found at the Santa Clara River east of Interstate 5. Suitable habitat occurs at the Santa Clara River crossing from MP 5.2 and MP 5.8 on the proposed Line 225 Pipeline Loop route. The Santa Clara River was surveyed in June 2005 for the presence of the arroyo toad, but no toads were observed. However, because of the presence of the species upstream from the ROW and the fact that suitable habitat is present at MP 5.2 and MP 5.8, the species is assumed, for purposes of this analysis, to be present within the ROW (see Figure 4.8-8a above). The Applicant would be required to follow the Applicant and mitigation measures identified in Section 4.8.4—specifically AM TerrBio-2b, AM TerrBio-2c, AM TerrBio-2d, AM TerrBio-2e, MM TerrBio-5a, MM TerrBio-2f, MM WAT-3a, and AM WAT-6b. Therefore, with implementation of the measures above, the proposed Project may affect but would not likely adversely affect this species.

Southern Steelhead (*Oncorhynchus mykiss irideus*) – Federal Endangered; California Special Status Species

The USFWS has listed the southern steelhead as potentially being present in the area; however, no suitable habitat for this species is crossed by the proposed Line 225 Pipeline Loop route. See Section 4.8.1.2 for further analysis of this species.

The Santa Clara River, San Francisquito Creek, and some segments of the pipeline route are known to support populations of special status flora and fauna species. Therefore, prior to conducting the surveys, the CNDDDB was queried for the area to identify species that could occur within 1 mile (1.6 km) of the Project area. Tables 4.8-9a and 4.8-9b (pages 4.8-141 and 4.8-145) list these species, their habitat, and their potential to be in the area. For federally listed species, initial Section 7 determinations are presented in compliance with Section 7(c) of the ESA of 1973, as amended. Consultation with USFWS is ongoing; Section 7 determinations shown reflect the current status of these consultations. Figures 4.8-7, 4.8-8a, and 4.8-8b above show sensitive resources, special status species locations, and potential habitat locations in the vicinity of the Line 225 Pipeline Loop in Los Angeles County.²

Table 4.8-9a (page 4.8-141) lists plant species that are potentially in the vicinity of the Line 225 Pipeline Loop. Of these, the CNDDDB database and literature review determined that six plant species are known to occur in the vicinity of the ROW: San Fernando Valley spineflower, slender-horned spineflower, California Orcutt grass, Plummer's mariposa lily, short-joint beavertail, and rayless ragwort.

California Orcutt grass has been documented within vernal pool habitat in the Project area. No vernal pool habitat was identified along the ROW; thus, the probability of species occurrence within the ROW would be considered extremely low.

Plummer's mariposa lily is listed as a CNPS 1B species. Historical records from the CNDDDB last observed the species within the Project area in 1968. Today much of the area where the species occurred has been developed, thereby reducing the potential for species occurrence. No species were observed during the spring and summer 2005 surveys; therefore, the proposed Project would be unlikely to adversely affect the Plummer's mariposa lily.

Short-joint beavertail is a succulent shrub that is listed as a CNPS 1B species. The species is known to occur along the ROW near MP 0.0. However, the spring and summer 2005 surveys did not identify the species within or along the ROW; therefore, the proposed Project would be unlikely to adversely affect the short-joint beavertail.

Rayless ragwort is a CNPS 2 species with historical occurrence (most recently in 1901) along the ROW between MP 2.0 and 5.0, based upon data provided by the CNDDDB. However, no individuals of the species were observed during the spring and summer 2005 surveys; therefore, the proposed Project would be unlikely to adversely affect the rayless ragwort.

Surveys of special status bird, reptile, and amphibian species were performed in June and early July 2005 for the least Bell's vireo, coastal California gnatcatcher, arroyo toad, and the western spadefoot toad.

² The special-status species locations shown in Figure 4.8-7 are based on CNDDDB data collected over a series of years. Accordingly, these data may not match current conditions shown in other figures.

The western spadefoot toad (*Spea hammondi*) is a State species of concern. Marginal habitat for the species occurs at MP 5.2 and MP 5.8, but surveys conducted in June 2005 did not locate the species. The species has been found within seasonal rainpools within the River Park development site approximately 0.6 mile (1 km) north of MP 3.5. However, due to the presence of the species upstream from the ROW and the fact that suitable habitat is present, the species is assumed, for purposes of this analysis, to be present within the ROW.

A wintering waterfowl survey and a burrowing owl survey were completed along the ROW. The wintering burrowing owl surveys were conducted on December 22, 2004, from 8:00 a.m. to 11:00 a.m., for a total of six survey hours, and followed the Burrowing Owl Survey Protocol developed by the California Burrowing Owl Consortium. Potential burrowing owl habitat exists at MP 0.0, MP 2.0, and MP 7.0. No visual observations or signs of burrowing owls, e.g., whitewash, burrows, pellets, and feathers, were detected along the ROW. Table 4.8-4 (page 4.8-113) presents the species identified during the wintering waterfowl survey that was conducted concurrently with the burrowing owl survey.

4.8.2 Regulatory Setting

Table 4.8-10 summarizes the major Federal, State, and local laws and regulations relating to terrestrial biological resources.

Table 4.8-10 Major Laws, Regulatory Requirements, and Plans for Biological Resources – Terrestrial

Law/Regulation/Plan/ Agency	Key Elements and Thresholds; Applicable Permits
General Protection	
State	
California Species Preservation Act of 1970; California Fish and Game Code §§ 900–903. - CDFG	<ul style="list-style-type: none"> Provides for the protection and enhancement of the amphibians, birds, fish, mammals, and reptiles of California.
California Fish and Game Code § 3503. - CDFG	<ul style="list-style-type: none"> Prohibits the taking and possession of any bird egg or nest, except as otherwise provided by this code or subsequent regulations.
California Fish and Game Code § 1930–1933. - CDFG	<ul style="list-style-type: none"> Provides for the Significant Natural Area program and database.
California Fish and Game Code § 3511, 4700, 5050, and 5515 -CDFG	Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code designate certain species as “fully protected.” Fully protected species, or parts thereof, may not be taken or possessed at any time without permission by the California Department of Fish and Game (CDFG). Section 3503 of the California Fish and Game Code affords protection to bird nests and birds of prey.

Table 4.8-10 Major Laws, Regulatory Requirements, and Plans for Biological Resources – Terrestrial

Law/Regulation/Plan/ Agency	Key Elements and Thresholds; Applicable Permits
Local	
Ventura County Protected Tree Ordinance - <i>Ventura County Planning Division</i>	<ul style="list-style-type: none"> Provides protection for designated tree species. The county governs the trimming or removal of “protected trees” in unincorporated areas (land outside of the cities). These include all oaks and sycamores of a minimum size, trees of any species with a historical designation, and large trees of any protected species (90-in [2.3 m] circumference). Before any live protected tree can be trimmed or removed, a tree permit must be obtained from the Planning Division.
Coastal Area Plan of the Ventura County General Plan - <i>Ventura County Planning Division</i>	<ul style="list-style-type: none"> Provides for the protection of designated environmentally sensitive areas in the coastal zone, including tidepools and beaches, creek corridors, coastal dunes, wetlands, and Mugu Lagoon.
City of Oxnard General Plan - <i>Oxnard Planning Commission</i>	<ul style="list-style-type: none"> Provides for the preservation and conservation of open-space land for natural resources such as riparian habitat, wetlands, and beaches and dunes.
County of Los Angeles Oak Tree Protection	<ul style="list-style-type: none"> Permit required for removal, encroachment, and trimming of oak trees.
County of Los Angeles General Plan - <i>Los Angeles County</i>	<ul style="list-style-type: none"> Includes measures to preserve and protect prime agricultural lands, forests, fisheries, SEAs, and biotic resources. SEAs include the marine shore and nearshore zone, especially lagoons and saltwater marshes; watersheds; streams; and riparian vegetation.
City of Santa Clarita General Plan - <i>City of Santa Clarita</i>	<ul style="list-style-type: none"> Includes measures to protect and preserve five SEAs within the City of Santa Clarita and Santa Clarita Valley. Three of these SEAs (the Santa Clara River, San Francisquito Canyon, and Valley Oaks Savanna) are within 1 mile (1.6 km) of the Project area. Requires environmental studies to be performed to assess the potential for damage or destruction of an SEA prior to approval of any plans for development in an area identified with an SEA.
Endangered Species	
Federal	
Endangered Species Act of 1973, 16 USC § 1531 et seq.; 50 CFR Parts 17 and 222. - <i>USFWS, National Oceanic and Atmospheric Administration (NOAA)</i>	<ul style="list-style-type: none"> Prohibits actions that may jeopardize the continued existence of threatened and endangered species. Protects and manages plants and animals and delineates areas of critical habitat for threatened and endangered species.
State	
California Endangered Species Act of 1984 (CESA); California Fish and Game Code §§	<ul style="list-style-type: none"> Provides for the protection of rare, threatened and endangered (T&E) plants and animals, as recognized by the CDFG, and prohibits the taking of such species without its authorization. Requires a permit to take a State listed species through incidental or

Table 4.8-10 Major Laws, Regulatory Requirements, and Plans for Biological Resources – Terrestrial

Law/Regulation/Plan/ Agency	Key Elements and Thresholds; Applicable Permits
2050 -2116. - <i>CDFG</i>	<p>otherwise lawful activities pursuant to § 2081(b) of the California Endangered Species Act (CESA).</p> <ul style="list-style-type: none"> Provides protection for those species that are designated as candidates for threatened or endangered listings.
California Coastal Act, §30121, §30233, § 30240 - <i>CCC</i>	<ul style="list-style-type: none"> Wetland means lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens. Diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts that would significantly degrade those areas and shall be compatible with the continuance of those habitat and recreation areas.
California Environmental Quality Act of 1970, (Public Resources Code §§ 21000-21177). - <i>California State Lands Commission (CSLC)</i>	<ul style="list-style-type: none"> Establishes requirements and procedures for State and local agency review of the environmental effects of projects proposed within their jurisdictions. Requires that a plant or animal that is not listed but can be shown to meet the criteria for listing under the CESA shall be given the same consideration as a listed species.
California Native Plant Protection Act of 1977; California Fish and Game Code § 1900 et seq. - <i>CDFG</i>	<ul style="list-style-type: none"> Includes provisions that prohibit the taking of listed rare or endangered plants from the wild and a salvage requirement for landowners. Provides the CDFG the authority to designate native plants as endangered or rare and provides specific protection measures for identified populations.
Migratory Birds/Birds of Prey/Protected Birds	
Federal	
Migratory Bird Treaty Act (MBTA): 16 USC §§ 703-711; 50 CFR Subchapter B. - <i>USFWS</i>	<ul style="list-style-type: none"> Protects migratory birds. Prohibits taking not authorized by Federal regulation. The current list of species protected by MBTA can be found in 50 CFR § 10.13. Does not cover non-native species such as house sparrows, European starlings, and rock doves.
Executive Order 13186 Responsibilities of Federal Agencies to Protect Migratory Birds under the MBTA	<ul style="list-style-type: none"> Directs executive departments and agencies to take certain actions to further implement the Act. Directs Federal agencies to further define what the term "action" means with respect to its own authorities and what programs should be included in the agency-specific Memoranda of Understanding required by this order. Actions delegated to or assumed by nonfederal entities, or carried out by nonfederal entities with Federal assistance, are not subject to this order.

Table 4.8-10 Major Laws, Regulatory Requirements, and Plans for Biological Resources – Terrestrial

Law/Regulation/Plan/ Agency	Key Elements and Thresholds; Applicable Permits
State	
California Fish and Game Code § 3503.5 - <i>CDFG</i>	<ul style="list-style-type: none"> Prohibits the taking, possession, or destruction of any birds-of-prey and their eggs and nests, in the orders Falconiformes or Strigiformes, except as otherwise provided by this code or subsequent regulations. Does not provide for the issuance of an incidental take permit.
California Fish and Game Code § 3513 – Adoption of the MBTA. - <i>CDFG</i>	<ul style="list-style-type: none"> Provides for the adoption of the MBTA's provisions. Does not include statutory or regulatory mechanism for obtaining an incidental take permit for the loss of non-game, migratory birds.
California Fish and Game Code §§ 3511 and 5050. - <i>CDFG</i>	<ul style="list-style-type: none"> Prohibits the taking and possession of birds and reptiles listed as “fully protected.”
Invasive Species	
Federal	
Executive Order 13112 – Invasive Species. - <i>Invasive Species Council</i>	<ul style="list-style-type: none"> Establishes an Invasive Species Council whose members include the Secretaries of State, Treasury, Defense, Interior, Agriculture, Commerce, Transportation, and the Administrator of the USEPA. Establishes an advisory committee to the Council and requires preparation of a national Invasive Species Management Plan. Orders Council to provide national leadership concerning invasive species and to ensure that Federal agency activities concerning invasive species are coordinated, complementary, cost-efficient, and effective.
Wetlands/Waterbodies/Floodplains	
Federal	
Clean Water Act of 1977, Section 404; 33 USC §§ 1251-1376; 30 CFR § 330.5(1)(26). - <i>USACE</i>	<ul style="list-style-type: none"> Regulates restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters, including rivers, wetlands, and sloughs. Requires permit for any activity that results in the deposit of dredge or fill material within the “Ordinary High Water Mark” of Waters of the United States.
Rivers and Harbors Act Section 10, 33 USC §§ 401 et seq. - <i>USACE</i>	<ul style="list-style-type: none"> Applies to waters of the United States. Requires 401 and 404 certifications.
Executive Order 11988, Floodplain Management, and 11990, Protection of Wetlands. - <i>USACE</i>	<ul style="list-style-type: none"> Requires that government agencies, in carrying out their responsibilities, provide leadership and take action to restore and preserve the natural and beneficial values served by floodplains and wetlands.

Table 4.8-10 Major Laws, Regulatory Requirements, and Plans for Biological Resources – Terrestrial

Law/Regulation/Plan/ Agency	Key Elements and Thresholds; Applicable Permits
State	
California Fish and Game Code, §§ 1600-1603. - CDFG	<ul style="list-style-type: none"> Regulates activities that will “substantially divert or obstruct the natural flow of, or substantially change the bed, channel, or bank of, or use material from the streambed of a natural watercourse” that supports wildlife resources. Includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation. Requires a Streambed Alteration Agreement for any project that would impact a river, stream, or lake. Requires agreement to implement mitigation measures if fish or wildlife would be substantially adversely affected.

The Applicant is required to address the proposed Project action in compliance with Section 7(c) of the ESA of 1973, as amended. Section 7 of the ESA ensures that, through consultation with the USFWS and National Oceanic and Atmospheric Administration (NOAA) Fisheries, Federal actions do not jeopardize the continued existence of any threatened, endangered, or proposed species, or result in the destruction or adverse modification of critical habitat. Consultation with USFWS and NOAA Fisheries is ongoing; Section 7 determinations shown reflect the current status of these consultations. Section 4.8.1 above and Tables 4.8-3a, 4.8-3b, 4.8-9a, and 4.8-9b (pages 4.8-104, 4.8-106, 4.8-141, and 4.8-145) contain information on each federally listed species. Appendix I presents documentation of Section 7 consultations that are currently in progress. The potential impacts on Federal status species discussed in this section reflect the current status of Section 7 consultations. Additional mitigation or changes in Section 7 determinations that are presented in this EIS/EIR may result upon release of the Biological Opinion; adherence to these changes will be a condition of the license, if granted.

4.8.3 Significance Criteria

For the purposes of the document, terrestrial biological impacts are considered significant if the Project would result in any of the following:

- Adversely affect a population of a threatened, endangered, regulated, or other sensitive species by reducing its numbers, altering behavior, reproduction, or survival; or causing loss or disturbance of habitat;
- Have a substantial adverse effect, either directly or indirectly, on any listed, proposed, or candidate endangered or threatened species listed under either the California or Federal ESA. Effects could include reducing the number or restricting the range of a threatened or endangered plant or animal;
- Cause a net loss in the functional habitat value of a sensitive biological habitat, including salt, freshwater, or brackish marsh; marine mammal haul-out or

breeding area; eelgrass; river mouth; coastal lagoon or estuary; seabird rookery; or area of special biological significance;

- Have a long-term adverse effect on federally protected wetlands, as defined by Section 404 of the CWA, through direct removal, filling, hydrological interruption, or other means;
- Violate Federal or State water quality standards from in-stream elevated turbidity or reduced dissolved oxygen, leading to changes in biota functioning abilities;
- Cause a substantial permanent adverse effect on wetland, riparian, or other sensitive habitat identified in local or regional plans, policies, or regulations, or by the CDFG, USFWS, or USACE;
- Introduce new, or leads to the expanded range of existing, noxious weed species or soil pests so that they interfere with successful revegetation or crop production;
- Adversely affect a species, natural community, or habitat that is recognized specifically as biologically significant in local, State, or Federal policies, statutes, or regulations;
- Directly impact nesting migratory birds, including raptors, protected under the Migratory Bird Treaty Act (MBTA); or
- Fail to comply with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

The significance criteria above are addressed in the impact analysis and were used to develop appropriate mitigation measures to avoid, reduce, or minimize identified impacts. The Applicant has also designed the Project and incorporated measures to avoid causing potential significant impacts. Consequently, the following significance criteria would not be applicable to the proposed Project, as explained below, and, as such, are not used further in the analysis:

- The Project would in no way impede or interfere with movement or migration of wildlife.
Once the pipeline has been installed there would be no aboveground structures that would block or impede wildlife movement or migration.
- The Project would not disturb a substantial part of a vegetation type within the local region to the point where natural or enhanced regeneration would not restore the resource to pre-disturbance conditions in at least three years.
All areas that would be disturbed by pipeline construction would be returned to the original condition by implementing revegetation and restoration efforts to comply with permit stipulations and conditions.
- The Project would not cause a potential public health hazard through the use, production, or disposal of materials that pose a hazard to wildlife or fish populations in the area.

Hazardous materials used during construction would be managed, stored, disposed, and cleaned up according to State and Federal laws.

- The Project would not conflict with provisions of an ongoing wetland restoration project, adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan or biological resource preservation policy. The Project would not impact any ongoing restoration project or conservation plan.

Habitat impacts associated with Ormond Beach would be avoided by using HDB technology to install the pipeline across the beach, and all construction activities would be confined to the Reliant Energy Ormond Beach Generating Station. The Line 225 Pipelines route would be installed within the existing bridge girder system while controlling for any potential impacts (e.g., introduction of construction debris to creek), thereby eliminating any impacts on the habitat along the Santa Clara River and San Francisquito Creek. In addition, the Applicant would avoid disturbing nesting birds such as the western snowy plover by construction outside the nesting season.

- There would be no potential for the Project to introduce invasive wildlife species into native, riparian, or wetland habitat areas where native species could become displaced or the genetic integrity of the native ecosystem could be degraded.

There are no known areas with the Project ROW that have high concentrations of invasive wildlife species that could displace or alter the genetic integrity of the native ecosystem.

- The Project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. No migratory fish corridors would be impeded by the Project because all flowing water features with fish would be crossed using either slick bores or case bores, thereby maintaining water flow within the feature. In addition, there are no known migratory corridors or nursery sites within the Project ROW that would be impacted by the Project.

4.8.4 Impact Analysis and Mitigation

Applicant-proposed measures (AM) and agency-recommended mitigation measures (MM) are defined in Section 4.1.5, "Applicant Measures and Mitigation Measures."

Impact TerrBio-1: Temporary Increase in Sedimentation

Construction activities could cause a temporary increase in sedimentation and soil erosion and expose contaminated soils during trenching activities, which could cover or damage plants, including special status species. The HDB procedures to install the pipelines beneath Ormond Beach may present remote potential for drilling fluid seepage. These construction methods could cause habitat degradation for sensitive and special status plant species or wetlands (CEQA Class II; NEPA minor adverse, short-term).

1 Along the proposed Center Road Pipeline route, the salt marsh bird's beak is the only
2 special status plant species that potentially occurs within 1,000 feet (305 m) of the route
3 near the beach adjacent to the Reliant Energy Ormond Beach Generating Station. In
4 addition, other sensitive plant species may also occur within the Ormond Beach area
5 but have not been documented by the CNDDDB or identified during the spring and
6 summer 2005 plant surveys. Direct impacts on special status plants would not be
7 expected because the pipelines would be installed using HDB to cross under the beach,
8 and all construction equipment would be staged within the Reliant Energy Ormond
9 Beach Generating Station. Additional impacts could be caused by an accidental
10 release of drilling fluids through the subsoil to the surface. An unanticipated release of
11 drilling fluids could be caused by pressurization of the drilling hole beyond the
12 containment capability of the subsoil. Impacts caused by the release of drilling fluids
13 could bury sensitive plants and vegetation within a wetland, potentially killing the plants
14 and altering wetland functions and values. However, the HDB technology uses low
15 drilling pressure during the installation process that would reduce the potential for a
16 release of drilling fluids during drilling operations. Releases of drilling fluids are
17 addressed in Section 4.18, "Water Quality and Sediments."

18 The proposed Center Road Pipeline route north of the Reliant Energy Ormond Beach
19 Generating Station traverses agricultural land that features exotic tree rows, urban
20 developed lands, coastal sage scrub, and coast live oak woodlands. Trenching
21 activities would temporarily disturb and expose soils, which may potentially cause
22 erosion. If it rains during trenching, sedimentation or erosion could bury or damage
23 some plants. Trenching may also expose contaminated soils that could be washed into
24 sensitive plant communities adjacent to the pipeline ROW. Some individual plants
25 could then be adversely affected.

26 Contaminated soils encountered during construction activities would require the
27 Applicant to manage them in compliance with Federal, State, and local regulatory
28 agency requirements (see Section 4.12, "Hazardous Materials"). The agricultural drain
29 | (CR-1) that would cross at MP 0.25 of the proposed Center Road Pipeline route flows
30 indirectly into Mugu Lagoon and the Pacific Ocean within 1 mile (1.6 km) of the ocean.
31 This drainage could contain the federally endangered tidewater goby. To minimize any
32 impacts on the tidewater goby and other aquatic species within the drainage, the
33 Applicant would install the pipeline using slick bore technology. During the slick bore
34 method, a pneumatic pipe rammer would be used to install a bore pipe under the
35 drainage. This method does not require the use of any drilling fluids, thereby avoiding
36 any sedimentation, turbidity, or erosion impacts within the bed and bank of the drainage.
37 | Other water features crossed by the Center Road Pipeline and/or alternatives (CR-1,
38 CR-2, CR-5, CR-6A/B, CR-10, CR-11, and CR-14) would be installed using the slick
39 bore technology or cased bore. Case bore technology also does not use drilling fluids.
40 Both bore methods would require excavation of entry and exit pits on both sides of the
41 water feature. To minimize soil erosion along the banks of the water feature, the
42 | Applicant would follow the measures in the SWPPP, which would include silt fence and
43 straw bale sediment barriers around the bore pits, as needed, to control sediment
44 runoff.

For the Line 225 Pipeline Loop, the South Fork Santa Clara River, Santa Clara River, and San Francisquito Creek would have to be crossed. The South Fork Santa Clara River would be crossed using a closed girder bridge while the Santa Clara River and San Francisquito Creek would be crossed with open girder bridges. The remaining water crossings (L7 through L9) would be trenched, and a tributary to the South Fork Santa Clara River (L5) would be crossed using a slick bore. The special status species that occur in the waterbodies along the Line 225 Pipeline Loop could be impacted by increased sedimentation and increased turbidity, which may stress these plants or make the habitat unsuitable. Other surface water features along the ROW could be impacted by sedimentation from stormwater runoff and increased erosion from exposed soil excavated during trenching activities.

The Applicant would be required to comply with all permit requirements (Federal CWA Section 404 [obtaining a permit from the USACE], California Clean Water Act Section 401 certification, and CDFG Section 1601, Streambed Alteration Agreement) for all water crossings or disturbances. In addition, the Applicant proposes to avoid, reduce, or minimize impacts caused by soil erosion and sedimentation by implementing best management practices (BMPs) and erosion control measures in the SWPPP. The Applicant would also prepare a Spill Prevention, Control, and Countermeasures (SPCC) Plan and HDD/HDB Drilling Contingency Plans to minimize potential impacts related to construction fluids in the event of equipment failure or leakage.

The unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), a Federal and State endangered species, is currently found in the upper Santa Clara River drainage in Los Angeles and Ventura Counties, and in San Francisquito Creek. The species was listed as endangered in 1970. Critical habitat was formally proposed for the species in 1980 by the USFWS, with the proposed designation consisting of approximately 30 river miles along the Santa Clara River and San Francisquito Creek.

The species is a small scaleless fish found in slow moving reaches of streams and rivers. The species is usually found in habitat that is shaded by dense vegetation and within open areas with algal mats or barriers, such as rocks or fallen wood. Threats to the species include continuing habitat degradation such as stream channelization, urbanization, OHV use, chemical/oil spills, agricultural development, water diversions, groundwater pumping, and the introduction of predators like bullfrogs and the African clawed frogs. Additional threats include other fish species that are considered competitors such as minnows and mosquito fish.

Breeding occurs in the late spring and early summer. The male builds a nest out of grass and sticks stuck together by a glue-like secretion. The nests may be located on the bottom or concealed in holes, cans, bottles, etc. Several females may deposit eggs in one nest. The male guards the nest until the eggs hatch and the young are on their own. A key habitat feature that appears to be essential for survival of the young is slow-flowing clear water; any amount of turbidity may interfere with development. Another key habitat feature for the unarmored threespine stickleback is that once the fry emerge, aquatic vegetation must be present along the shoreline to provide cover and food.

Research found there is some reproduction in most months if the stream flow remains low, but the peak time begins in March and continues into early summer.

Normal lifespan of the unarmored threespine stickleback generally encompasses only one spawning season, but in rare occasions an individual might survive up to three years. Direct impacts on the species would not be expected for the South Fork Santa Clara River because the pipelines would be installed in a closed girder bridge while the Santa Clara River and San Francisquito Creek would be crossed with open girder bridges. Indirect impacts that may occur include increased sedimentation and increased turbidity from water used during the construction procedure for the closed girder bridge crossings. The minor volume of water that may seep through during the construction procedure would be captured in buckets placed beneath all seeps into the dry river bed, thereby reducing or eliminating any indirect impacts on the species.

The remaining water crossings (L7 through L9) would be trenched, and a tributary to the South Fork Santa Clara River (L5) would be crossed using a slick bore. These construction methods could increase sedimentation, increase turbidity, disturb the bed and bank of the river, and remove vegetation along the bank of the river; however, the use of the slick bore to cross the South Fork Santa Clara River would not require the use of any drilling fluids, thereby avoiding any sedimentation, turbidity, or erosion impacts within the bed and bank of the drainage.

The Applicant has incorporated the following measures into the Project:

AM TerrBio-1a. Erosion Control. To minimize sedimentation, the Applicant or its designated representative would implement the following measures during construction:

- Clearing of vegetation would be confined to the minimal area needed to conduct the construction activities.
- Any work near or adjacent to any stream, wetland, or waterway would be protected by installing erosion-control fencing or other devices such as hay bales, straw rolls, matting, or mulch.
- Work near or in waters of the United States would be conducted in a manner that minimizes turbidity, erosion, and other water quality impacts regulated by resource agencies.
- Any construction debris that may be stored near or adjacent to streams or other waterways would be contained to prevent any erosion into the adjacent streams or waterways.
- Construction equipment would be stored and maintained at least 50 feet (15.2 m) from streams or other waterways.
- At the completion of construction activities, disturbed soils would be stabilized and erosion-control fencing would remain until restoration activities ensure that soil is properly stabilized.

- BMPs would be incorporated into the construction activities.

Mitigation Measures for Impact TerrBio-1: Temporary Increase in Sedimentation

MM TerrBio-1b. Spill Containment/Management. The Applicant or its designated representative shall implement the following measures to control and manage spills:

- When working near waterways, the contractor shall have an emergency spill containment kit to contain and remove spilled fuels and hydraulic fluids.
- When feasible, equipment and vehicles shall be fueled and maintained in a designated Maintenance and Staging Area. Equipment refueling or storage of hazardous or petroleum materials shall not occur within 100 feet (30.5 m) of sensitive habitat, wetlands, beaches, streams, or other waterways. If a 100-foot (30.5-m) buffer is not feasible for a given refueling activity, secondary containment shall be employed during the fuel transfer, and the transfer shall be continuously monitored to prevent accidental spills.
- If a designated area is not available, construction equipment shall be stored and maintained at least 100 feet (30.5 m) from any jurisdictional stream channel, or as far away as available space allows in the ROW corridor. If this is not feasible at a particular crossing location because of space limitations or equipment breakdown, the Applicant shall implement BMPs to ensure that equipment, fuel, and spoils do not enter the stream channel. Appropriate BMPs include safety fencing, secondary containment for fuel tanks and fuel transfers, drip pans, spill kits, and proper disposal of waste products.
- All contaminated soils and materials shall be excavated and removed from the site and disposed of appropriately to prevent sensitive animal species from becoming exposed to or killed by the effects of fuel, oil, or other chemicals used during construction.

MM WAT-3a. Drilling Fluid Release Monitoring Plan would apply here (see Section 4.18, “Water Quality and Sediments”).

MM WAT-4a. Strategic Location for Drilling Fluids and Cuttings Pit would apply here (see Section 4.18, “Water Quality and Sediments”).

Impacts on water quality from sedimentation would have adverse impacts on special status plants or wetlands; however, with implementation of these measures, impacts would be reduced to a level below the significance criteria. These mitigation measures have been developed to avoid or reduce the potential for soil and hazardous materials

to enter wetlands, surface water features, and sensitive habitat by requiring construction barriers such as erosion control devices and buffer set-backs from sensitive habitat.

Impact TerrBio-2: Temporary or Permanent Impacts Regarding Construction, Operation, and Maintenance Effects on Rare and Special Status Plants

Upland vegetation removal during onshore pipeline construction, maintenance, and repair activities could result in the loss of special status plants (CEQA Class II; NEPA major or moderate adverse, short- or long-term).

A comprehensive botanical survey has been conducted that identified special status plants along the proposed pipeline routes. Specific information regarding special status species is derived from the CNDDDB and the spring and summer 2005 plant surveys.

Habitat for other special status plant species exists along the Line 225 Pipeline Loop and the Center Road Pipeline.

As discussed in Impact TerrBio-1, there would be no anticipated impacts on the salt marsh bird's beak associated with the Center Road Pipeline alternative because the pipeline installation would occur 50 feet (15.2 m) below the ground surface, avoiding any permanent loss of individual plants. If a release of drilling fluids were to occur during drilling operations, the Applicant would implement the HDB Contingency Plan. Measures in the plan require drilling operations to cease and the CDFG and USFWS be contacted to develop measures to clean up the release site without any further impacts on the saltmarsh bird's beak. These measures would also apply for the NBVC Point Mugu and Arnold Road crossings if drilling fluids were released.

The expansion of the Center Road Valve Station would not impact any special status plants or habitat that could support rare, threatened, or endangered plants. The expansion would remove orchards, which would not support special status plants due to farming operations and harvesting practices.

Impacts during normal pipeline maintenance would affect fewer acres because work would occur within the 25-foot (7.6 m) permanent easement or the 12-foot (3.7 m) ROW for operations and maintenance.

The loss of individual special status plants or known habitat for rare, threatened, or endangered plant species would be considered a significant impact. Such long-term impacts could occur where construction-related activities would occur in undeveloped areas. Pipeline construction and repair would include excavation, unearthing the pipeline, and backfilling; thus, vegetation would be removed and soil disturbed. These activities could remove sensitive vegetation types, individuals, seeds, or their habitat during excavation; cause erosion/sedimentation during soil excavation or backfilling; deposit hazardous substances, e.g., diesel fuel; result in hydrologic alteration of wetlands from improper backfilling, compaction, or recontouring; or facilitate weed invasions due to soil disturbance and seed import. Pipeline maintenance activities would include driving vehicles along the ROW. These activities could crush vegetation,

cause erosion/sedimentation into habitat due to driving in wet soil conditions and disturb the ground surface, thus facilitating weed invasion.

The Applicant has incorporated the following into the proposed Project:

AM TerrBio-2a. Additional Pre-Construction Plant Surveys. The Applicant or its designated representative would conduct additional pre-construction surveys to further define the location of special status plants identified during the spring and summer 2005 surveys. The surveys would be conducted according to survey protocols established by the USFWS or the CDFG. These surveys would occur prior to initiation of construction activities.

The surveys would be conducted at the appropriate time of year in order to confirm the presence or absence of special status plants occurring within the Project area. Results of the additional surveys would supplement the existing data and would be used to map sensitive areas for avoidance during construction. Any future maintenance activities would require new surveys and consultation with the USFWS and/or the CDFG prior to ground disturbance. If listed plants were identified in the construction areas, the Applicant would comply with the terms and conditions in the Biological Opinion (BO) for the Project. Sensitive resources near construction areas would be identified and clearly marked for avoidance. Taking of Federal- or State-listed species would be avoided or would be consistent with appropriate permits and the terms and conditions in the BO.

Additional measures that would be undertaken include the following:

- Delineation of habitat for special status species would be conducted by a qualified botanist. Flagging, mapping, and fencing would be used to protect any special status plants within 200 feet (61 m) of the ROW.
- Any special status plants within the 80-foot (24.4 m) ROW, work areas, access roads, and staging areas would be flagged, mapped on construction plans, and fenced to protect the area during construction.
- A biological monitor would supervise installation of construction fencing, and appropriate buffer distances would be determined. The monitor would have the authority to require installation of silt fencing in highly sensitive areas or under certain conditions where erosion could impact a special status plant or its habitat.
- If sensitive resources cannot be avoided, no work would be authorized until the appropriate resource agencies (CDFG and

USFWS) determine that the action would not result in significant biological impacts.

AM TerrBio-2b. Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP).

Additional surveys would be conducted within any areas potentially impacted by Project activities during construction or operation where special status plant species potentially occur. Surveys would be conducted in consultation and coordination with agencies and according to any existing species-specific protocols. Results of the surveys would be used to develop a BRMIMP. The Applicant's proposed mitigation measures to address construction and maintenance effects on special status plant species include implementation of a BRMIMP. It would identify:

- All biological resources mitigation, monitoring, and compliance conditions specified in any permits acquired for the Project;
- All sensitive biological resources to be impacted, avoided, or mitigated by Project construction, operation, and closure;
- All required mitigation measures/avoidance strategies for each sensitive biological resource;
- All locations, on a map of suitable scale, of laydown areas and areas requiring temporary protection and avoidance during construction;
- All natural areas disturbed during Project construction activities in pre- and post-construction photographs;
- Duration of biological monitoring and a description of monitoring methodologies and frequency;
- Success criteria for proposed mitigation; and
- Remedial measures to be implemented if success criteria are not met.

The Applicant's measures for the BRMIMP would include the following:

- Measures to avoid special status wildlife and plants and their habitats during pipeline construction, operations, and maintenance, including restrictions in sensitive coastal areas, mapping, and avoidance of sensitive resources;
- Measures to protect nesting birds under the Migratory Bird Treaty Act, including avoiding construction activities during the breeding season. If construction cannot avoid the breeding season, preconstruction surveys for nests would occur per

CDFG protocols; any nest found within the construction area would be subject to CDFG buffer and monitoring requirements and would require consultation with the CDFG;

- Restoration of sensitive vegetation types (coastal and riparian) potentially impacted during pipeline installation or repair, in accordance with other relevant mitigation measures;
- Inclusion of measures in an Operation and Maintenance Plan to avoid and minimize impacts on special status wildlife, plants, bird nesting areas, and sensitive or protected habitats such as riparian areas during routine operation or maintenance activities;
- Creation of a map of the pipeline route depicting the location of all special status plants, wildlife, important nesting areas, and wetlands, to be used during necessary vehicular travel, for pedestrian use, or during equipment placement, to avoid these resources;
- Prohibition of disturbance to and clearing of coastal, riparian, and wetland vegetation during inspections. Travel and work areas would be flagged and fenced before repair work to identify and avoid impacts on sensitive habitats as depicted on the pipeline map; and
- Maintenance of records of mitigation implementation on file at the pipeline maintenance office.

AM TerrBio-2c. Employee Environmental Awareness Program (EEAP). The Applicant or its designated representative would conduct an employee awareness program before groundbreaking to explain the applicable endangered species laws and any endangered species concerns to contractors working in the area. Through the EEAP, all of the Applicant's employees, designated representatives, and subcontractors would be informed of the sensitive biological resources potentially occurring in the Project area. The Applicant's EEAP would:

- Discuss the locations and types of sensitive biological resources on the Project site and in adjacent areas;
- Discuss the importance of removing trash from the work area and adhering to all other applicable BMPs;
- Cite the laws, policies, or other reasons for protecting these resources;
- Present the meaning of various temporary and permanent habitat protection measures;

- Describe what to do if previously unidentified sensitive resources are encountered;
- Identify whom to contact if there are further comments and questions regarding the material discussed in the program;
- Discuss traffic management strategies to avoid mortality of small mammals, reptiles, and other less mobile species, which are designated as rare, threatened, endangered, or a species of concern, pursuant to the first bullet. Such strategies may include (1) restriction of all Project-related vehicle and equipment traffic to established roads or access routes; (2) enforcement of a 20-mile (32 km) per hour speed limit within the work areas, except on county roads and highways; and (3) identification of vehicle and equipment access routes and work area before pipeline construction activities begins; and
- Discuss the importance of maintaining site safety to avoid mortality of small mammals, reptiles, and other less mobile species, which are designated as rare, threatened, endangered, or a species of concern, pursuant to the first bullet. Issues to discuss may include (1) prohibition of pets or firearms on the Project site; (2) maintenance of designated protected areas; and (3) installation of exclusionary fencing in and flagging of adjacent habitats that potentially support listed species or sensitive habitat to delineate work area to prevent equipment from entering into adjacent habitat.

Each participant in the on-site EEAP would sign a statement declaring that he or she understands and will abide by the guidelines set forth in the program materials.

In addition, the Applicant would be responsible for ensuring that all Project personnel and subcontractors adhere to the guidelines and restrictions. Additional training would be conducted as needed—including morning “tailgate” sessions—to update crews as they advance into sensitive areas and to educate new personnel brought on the job during the construction period. Project personnel would receive a hardhat sticker or be issued a card verifying compliance with these measures. In addition, a record of all personnel trained during the Project would be maintained and made available for compliance verification.

AM TerrBio-2d. Biological Monitoring. The Applicant or its designated representative would use a qualified biological monitor to conduct the EEAP program and on-site biological monitoring. According to the Applicant, the minimum qualifications of the biological monitor would be:

- A bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field;
- Three years of experience in field biology;
- One year of field experience with resources found in or near the Project area; and
- Ability to demonstrate the appropriate education and experience for the biological resource tasks that must be addressed during Project construction and operation.

The biological monitor would supervise and verify the implementation of the EEAP, the Erosion Control Plan, and the BRMIMP. The biological monitor would be present for all water crossings and for work in areas where sensitive plants have been identified and would be responsible for pre-construction surveys, administering the EEAP for construction crews, staking sensitive resources, on-site monitoring, documentation of violations and compliance, coordination with contract compliance inspectors, and post-construction documentation. The biological monitor would be qualified to recognize potential construction effects on these resources. The biological monitor would ensure that State and/or Federal wetland protection guidelines are followed and that an adequate setback of at least 15 feet (4.6 m) (or other distance mandated by the CDFG or the USFWS) is observed at wetland and/or riparian (woody vegetation) edges.

AM TerrBio-2e. Confine Activity to Identified ROW. The Applicant or its designated representative would limit all proposed roadway construction to the existing roadway surface wherever special status plants or their habitats occur adjacent to the roadway.

In addition, the Applicant would confine construction equipment to the roadway surface and would restrict associated activities to the 80-foot (24.4 m) ROW in all areas that support sensitive resources near work areas, as identified on Project maps. In sensitive areas that would be avoided by directional drilling, drill rigs and equipment staging would remain outside sensitive habitats, with an adequate buffer, consistent with established resource agency guidelines to avoid potential adverse effects on the resource. Work area boundaries would be delineated with flagging or other marking to minimize surface disturbance associated with vehicle straying and to minimize the potential for inadvertent worker intrusion into sensitive areas. Special habitat features identified by the biological monitor would be avoided, and previously disturbed areas within the Project ROW would be used for stockpiling excavated materials, equipment storage, and vehicle parking. During EEAP

training, construction personnel would be informed of the importance of remaining within the designated ROW. The Lead Resource Coordinator, with support from biological monitor(s), as necessary, would ensure that construction equipment and associated activities avoid any disturbance of sensitive resources outside the ROW.

Mitigation Measures for Impact TerrBio-2: Temporary or Permanent Impacts Regarding Construction, Operation, and Maintenance Effects on Rare and Special Status Plants

MM TerrBio-2f. Riparian Avoidance and Restoration. The Applicant or its designated representative shall avoid, minimize, and compensate for impacts on riparian habitat during construction due to trenching or open cut crossings of waters of the United States by:

- Avoiding potential impacts on riparian forest by clearly identifying and marking important areas, boring under waters of the United States where feasible, and identifying any proposed riparian habitat removal (and subsequent restoration) locations;
- Consulting with the CDFG for any unavoidable impacts on riparian vegetation, and fencing riparian vegetation adjacent to work areas to prevent impacts;
- Preparing and implementing riparian restoration, including replanting and monitoring elements. Implementation of these measures shall be supervised and verified by an approved biological monitor;
- Before construction, identifying methods to restore the beds and banks of waters of the United States to pre-construction conditions, including appropriate replacement ratios. Such methods shall be in accordance with issued permit conditions or, at a minimum, a 3:1 replacement ratio of habitat acreage and a 2:1 replacement ratio of trees (as recommended by CDFG) and shrubs present before construction; and
- Identifying restoration methods, including native tree and shrub species matching pre-construction conditions, understory native seed mix composition and application methods, planting methodology, description of monitoring efforts to measure replacement success, success criteria, and contingency measures for off-site habitat creation in the event mitigation measures are unsuccessful or success criteria are not satisfied.

MM TerrBio-2g. Tree Avoidance and Replacement. The Applicant or its designated representative shall, to the extent possible, avoid, minimize, and compensate for impacts on trees by implementing the following:

- Pre-construction identification, fencing, and avoidance of trees to the maximum practicable extent during construction;
- Replanting of tree rows impacted by construction activities on a 2:1 replacement ratio, as recommended by CDFG. Replacement trees would be 15-gallon trees approximately 8 to 10 feet in height. The type of tree planted would be determined in consultation with the CDFG and the landowner, and planting of native tree species such as native sycamore, oak or other large native tree species is recommended;
- Consultations with local jurisdictions if unavoidable impacts on locally protected trees (“Protected Trees”) are likely to occur. Pockets of coast live oaks potentially occur within the proposed Project ROW in Los Angeles County, and permits must be obtained if any of these trees would have to be removed for pipeline installation;
- Replacement of oak trees as required under the City of Santa Clarita Oak Tree Ordinance;
- Development and implementation of a Tree Replacement Plan for loss of and/or significant damage to trees;
- Supervision and verification of the implementation of these measures by the biological monitor; and
- Monitoring, nurturing and protection within the dripline of trees replaced for a minimum of five years.

Impacts on rare and special status plants would be reduced to a level below significance criteria by avoiding or reducing impacts on special status plants, sensitive and high-value wildlife habitats, and trees protected by local ordinance or policies.

Impact TerrBio-3: Temporary or Permanent Changes to Wetlands or Waters of the United States during Construction

Construction (such as trenching) in wetlands or waters of the United States could remove vegetation, including special status species, disrupt the hydrology of the wetlands within and adjacent to the construction area, or alter the habitat for special status plant species (CEQA Class II; NEPA major or moderate adverse, short- or long-term).

The wetland delineation survey prepared by the Applicant for submittal to the USACE identified 57 features along the pipeline routes in Ventura and Los Angeles Counties. Approximately 0.2 acres (0.1 ha) of wetlands and 6.9 acres (2.8 ha) of other waters of the United States could be affected along the proposed Center Road Pipeline (see Tables 4.8-2a and 4.8-2b [pages 4.8-98 and 4.8-99]). One feature, CRALT-2, is not considered jurisdictional and therefore is not included in the total acreage of potentially jurisdictional other waters. Approximately 3.8 acres (1.5 ha) of wetlands and 7.7 acres

(3.1 ha) of waters of the United States were delineated along the proposed Line 225 Pipeline Loop (see Table 4.8-2b [page 4.8-99]); however, it is estimated that only 1.0 acre of other waters would be affected during construction (see Table 4.8-2a [page 4.8-98]). Temporary impacts could be caused by interception and detention of groundwater or surface water within the excavated trench, thus reducing the hydrologic input to the adjacent feature. Long-term hydrologic changes to features could result from trench backfill and topographic restoration activities. Backfill material and methods could affect wetland hydrology by altering surface and subsurface flow. For example, the pipeline backfill materials (such as gravel or coarse-texture non-native fill) could be more or less permeable than native materials. Surface alteration could impede or accelerate drainage. Compaction and settlement of backfill could create ditches along the pipeline. Excess backfill may restrict surface water or groundwater connections to those features identified during the survey. Impacts on the hydrologic function of features would be considered potentially significant.

Crossings of waters of the United States for the Line 225 Pipeline Loop would occur at the Santa Clara River, the South Fork Santa Clara River, and San Francisquito Creek. The pipeline would cross Santa Clara River at McBean Parkway and San Francisquito Creek at McBean Parkway by hanging underneath open girder bridges. The pipeline across the South Fork Santa Clara River at Magic Mountain Parkway would be installed inside a closed girder bridge. The remaining water crossings (L7 through L9) would be trenched, and a tributary to the South Fork Santa Clara River (L5) would be crossed using a slick bore.

Once installation of the pipelines beneath all water crossings has been completed, the area would be returned to its original configuration, the substrate would be replaced, and the banks would be stabilized and revegetated as necessary. A USACE Clean Water Act Section 404 Nationwide Permit No. 12 (Utility Line Activities), a Section 401 Water Quality Certification from the Regional Water Quality Board (RWQCB), and a CDFG Streambed Alteration Agreement (Fish and Game Code § 1602) would be obtained for watercourse crossings as required. The Applicant or its designated representative would obtain all permits. Where construction activities impact wetlands and waters of the United States, the Applicant or its designated representative would be required comply with all mitigation measures identified by the USACE in the 404/401 permits.

The Applicant has incorporated the following measures in the proposed Project:

AM WAT-6b. Spill Response Plan (see Section 4.18, “Water Quality and Sediments”).

Mitigation Measures for Impact TerrBio-3: Temporary or Permanent Changes to Wetlands or Waters of the United States During Construction

MM TerrBio-3a. Avoid, Minimize, or Reduce Impacts on Wetlands. Impacts on wetlands or waters of the United States shall be avoided,

minimized, or reduced by at least the following mitigation measures:

- Identifying and marking any wetland areas, including those identified to support special status species, to be avoided during construction and operation activities;
- Limiting the width of the construction ROW through identified wetlands or waters;
- Limiting the operation of construction equipment within the wetlands or waters to the greatest extent possible; and
- Using prefabricated mats in saturated or standing water wetlands.

MM TerrBio-2f. Riparian Avoidance and Restoration would apply here.

With the implementation of these measures, the impact would be reduced to a level below significance criteria by avoiding or reducing impacts on wetlands and waters of the United States. Specifically, impacts would be reduced by avoiding impacts on special status species and by limiting the area in which construction would occur. In addition, special precautions would be taken when operating within wetlands and waters of the United States.

Impact TerrBio-4: Permanent Impact Caused by Noxious Weed Invasion

Construction-related disturbance could provide an opportunity and seedbed for the invasion of weeds, which could adversely affect special status plant species or habitats and upland vegetation (CEQA Class III; NEPA major or moderate adverse, short- or long-term).

Most noxious and invasive species are aggressive pioneers that have a competitive advantage over other species. All areas disturbed by construction activities are potential habitat for noxious and invasive species. The introduction of new noxious species from other areas can occur from construction equipment and other vehicles transporting seeds. Once noxious and invasive species are established in an area, negative impacts can include one or more of the following, depending on the species, degree of invasion, and control measures:

- Loss of wildlife habitat;
- Alteration of wetland and riparian functions;
- Negative impact on agricultural crops;
- Displacement of native plant species;
- Reduction in plant diversity;
- Changes in plant community functions; and

- Increased soil erosion and sedimentation.

The Applicant has incorporated the following into the Project:

AM TerrBio-4a. Weed Management. The Applicant or its designated representative would implement the following measures to prevent the spread of invasive weeds:

- A noxious weed survey would be performed to identify known locations of noxious weeds or populations currently being managed by the county noxious weed boards.
- Invasive exotic plants would be removed from the work area.
- When equipment is mobilized from an area infested with exotic plant species, the tires and undercarriages of all vehicles and construction equipment would be sprayed or washed to prevent the spread of noxious weed species into an unaffected area.

Other elements of the Applicant's Weed Management Program would include procedures to monitor and control the spread of weed populations along the pipeline. The biological monitor would implement the program by following procedures outlined in the Weed Management Program:

- Clean all vehicles used in terrestrial construction before operating on and off maintained roads;
- Obtain all fill material, soil amendments, and gravel required for construction/restoration activities from a "weed-free" source;
- Clear existing vegetation from areas only for the width needed for active construction activities;
- Salvage and replace the upper 12 inches (0.3 m) of topsoil (or less, depending on the existing depth of the topsoil) wherever the pipeline is trenched through open land (not including graded roads and road shoulders); and
- Revegetate disturbed soils with an appropriate seed mix that does not contain introduced or noxious weeds.

Implementation of the Applicant's measure would make noxious weed invasion an adverse but less than significant impact because the potential to spread noxious weeds throughout the Project area would be eliminated. No mitigation is required.

Impact TerrBio-5: Direct Permanent Impact on Wildlife Mortality

Construction activities associated with pipeline installation, staging areas, HDD or HDB locations, and access roads could cause the mortality of small mammals,

reptiles, and other less-mobile species. Direct mortality could also be associated with increased human activity, particularly involving wildlife habitat removal and animal/vehicle collisions (CEQA Class II; NEPA moderate or major adverse, long-term).

Wildlife mortality may occur during vegetation and earth removal, grading, trenching, and staging, as well as by vehicle-wildlife accidents. Organisms most susceptible to direct mortality include ground-nesting birds, slow-moving species, and burrowing species. These activities could crush, smother, hit, or bury some wildlife or their nests/burrows.

Most of the proposed pipeline routes would be constructed along previously disturbed habitats. Most wildlife in these areas are common, wide-ranging and locally and regionally abundant species such as raccoons, opossums, and coyotes. These species are expected to quickly recolonize the ROW after restoration activities are completed.

The Applicant has incorporated the following into the proposed Project:

AM TerrBio-2c. Employee Environmental Awareness Program (EEAP)

AM TerrBio-2d. Biological Monitoring

Mitigation Measures for Impact TerrBio-5: Direct Permanent Impact on Wildlife Mortality

MM TerrBio-5a. Pre-Construction Wildlife Surveys. To minimize the potential for causing mortality of local wildlife, the Applicant or its designated representative shall engage a qualified wildlife biologist to conduct additional pre-construction surveys in advance of any vegetation clearing, or excavation or other activity that causes disturbance to surface soils. Surveys would be completed by a competent biologist, familiar with local birds, mammals, amphibians, and reptiles, with survey requirements including any relevant agency protocols, and survey seasons.

To further minimize the potential of causing direct mortality to wildlife, the Applicant would implement the EEAP. Measures of the EEAP would include establishment of a slow vehicle speed limit to avoid vehicle-wildlife accidents; to identify, delineate and protect sensitive habitat; and to ensure a clean work environment and adherence to any other BMPs. Construction crews would be educated regarding sensitive wildlife that could be encountered and how to safely avoid them. The biological monitor would observe crew behavior to ensure that the requirements identified in the EEAP are implemented. With the implementation of these measures, the impact would be reduced to a level below significance and no additional mitigation measures would be required.

Impacts and mitigation measures associated with terrestrial biological resources are summarized in Table 4.8-11.

Table 4.8-11 Summary of Terrestrial Biological Resources Impacts and Mitigation Measures

Impact	Mitigation Measure(s)
<p>Impact TerrBio-1: Temporary Increase in Sedimentation</p> <p>Construction activities could cause a temporary increase in sedimentation and soil erosion and expose contaminated soils during trenching activities, which could cover or damage plants, including special status species. The HDB procedures to install the pipelines beneath Ormond Beach may present remote potential for drilling fluid seepage. These construction methods could cause habitat degradation for sensitive and special status plant species or wetlands (CEQA Class II; NEPA minor adverse, short-term).</p>	<p>AM TerrBio-1a. Erosion Control. To minimize sedimentation, the Applicant or its designated representative would implement erosion control measures during construction.</p> <p>MM TerrBio-1b. Spill Containment/Management. The Applicant or its designated representative shall implement measures to control and manage spills.</p> <p>MM WAT-3a. Drilling Fluid Release Monitoring Plan (see Section 4.18, “Water Quality and Sediments”).</p> <p>MM WAT-4a. Strategic Location for Drilling Fluids and Cuttings Pit (see Section 4.18, “Water Quality and Sediments”).</p>
<p>Impact TerrBio-2: Temporary or Permanent Impacts Regarding Construction, Operation, and Maintenance Effects on Rare and Special Status Plants</p> <p>Upland vegetation removal during onshore pipeline construction, maintenance, and repair activities could result in the loss of special status plants (CEQA Class II; NEPA major or moderate adverse, short- or long-term).</p>	<p>AM TerrBio-2a. Additional Pre-Construction Plant Surveys. The Applicant or its designated representative would conduct additional pre-construction surveys to further define the location of special status species identified during the spring and summer 2005 surveys. The surveys would be conducted according to survey protocols established by the USFWS or the CDFG.</p> <p>AM TerrBio-2b. Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP). Surveys would be conducted within any areas potentially impacted by Project activities during construction or operation where special status species potentially occur. Results of the surveys would be used to develop a BRMIMP, which the Applicant would implement.</p> <p>AM TerrBio-2c. Employee Environmental Awareness Program (EEAP). The Applicant or its designated representative would conduct an employee awareness program before groundbreaking to explain the applicable endangered species laws and any endangered species concerns to contractors working in the area. The EEAP would also include: trash removal, policies regarding habitat protection measures, traffic management and site safety.</p> <p>AM TerrBio-2d. Biological Monitoring. The Applicant or its designated representative would use a qualified biological monitor to conduct the EEAP program and on-site biological monitoring.</p> <p>AM TerrBio-2e. Confine Activity to Identified Right-of-Way (ROW). The Applicant or its designated representative would limit all proposed roadway construction to the existing roadway surface wherever special status plant species or habitats occur adjacent to the roadway.</p> <p>MM TerrBio-2f. Riparian Avoidance and Restoration. The Applicant or its designated</p>

Table 4.8-11 Summary of Terrestrial Biological Resources Impacts and Mitigation Measures

Impact	Mitigation Measure(s)
	<p>representative shall avoid, minimize, and compensate for impacts on riparian habitat during construction due to trenching or open cut crossings of waters of the United States.</p> <p>MM TerrBio-2g. Tree Avoidance and Replacement. The Applicant or its designated representative shall, to the extent possible, avoid, minimize, and compensate for impacts on trees.</p>
<p>Impact TerrBio-3: Temporary or Permanent Changes to Wetlands or Waters of the United States during Construction Construction (such as trenching) in wetlands or waters of the United States could remove vegetation, including special status species, disrupt the hydrology of the wetlands within and adjacent to the construction area, or alter the habitat for special status plant species (CEQA Class II; NEPA major or moderate adverse, short- or long-term).</p>	<p>AM WAT-6b. Spill Response Plan. The Applicant or its designated representative would prepare a spill response plan to protect surface water at and near the surface water crossings. This plan would be incorporated into the SWPPP as a requirement of the construction storm water NPDES permit and the SPCC Plan. The plan would identify specific measures to prevent, contain, and clean up any spills that could enter surface water pathways.</p> <p>MM TerrBio-3a. Avoid, Minimize, or Reduce Impacts on Wetlands. Impacts on wetlands or waters of the United States shall be avoided, minimized, or reduced.</p> <p>MM TerrBio-2f. Riparian Avoidance and Restoration.</p>
<p>Impact TerrBio-4: Permanent Impact Caused by Noxious Weed Invasion Construction-related disturbance could provide an opportunity and seedbed for the invasion of weeds, which could adversely affect special status plant species or habitats and upland vegetation (CEQA Class III; NEPA major or moderate adverse, short- or long-term).</p>	<p>AM TerrBio-4a. Weed Management. The Applicant or its designated representative would implement measures to prevent the spread of invasive weeds.</p>
<p>Impact TerrBio-5: Direct Permanent Impact on Wildlife Mortality Construction activities associated with pipeline installation, staging areas, HDD or HDB locations, and access roads could cause the mortality of small mammals, reptiles, and other less-mobile species. Direct mortality could also be associated with increased human activity, particularly involving wildlife habitat removal and animal/vehicle collisions (CEQA Class II; NEPA major or moderate adverse, long-term).</p>	<p>AM TerrBio-2c. Employee Environmental Awareness Program (EEAP).</p> <p>AM TerrBio-2d. Biological Monitoring.</p> <p>MM TerrBio-5a. Pre-Construction Wildlife Surveys. To minimize the potential for causing mortality of local wildlife, the Applicant or its designated representative shall engage a qualified wildlife biologist to conduct additional pre-construction surveys in advance of any vegetation clearing, or excavation or other activity that causes disturbance to surface soils.</p>

1 4.8.5 Alternatives

2 4.8.5.1 No Action Alternative

3 As explained in greater detail in Section 3.4.1, under the No Action Alternative, MARAD
4 would deny the license for the Cabrillo Port Project, the Governor of California would
5 disapprove the Project under the provisions of the DWPA, or the CSLC would deny the

application for the proposed lease of State tide and submerged lands for a pipeline right-of-way. Any of these actions or disapproval by any other permitting agency could result in the Project not proceeding. The No Action Alternative means that the Project would not go forward and the FSRU, associated subsea pipelines, and onshore pipelines and related facilities would not be installed. Accordingly, none of the potential impacts on terrestrial biological resources identified for the construction and operation of the proposed Project would occur.

Specifically, potential impacts that would not occur if the No Action Alternative is implemented include the following:

- Temporary increase in sedimentation and soil erosion and exposure of contaminated soils during trenching activities, which could cover or damage plants or have indirect adverse impacts on unarmored threespine stickleback;
- Loss of special status upland vegetation during onshore pipeline construction, maintenance, and repair activities, including within approximately 1.3 miles (2.1 km) of coastal California gnatcatcher designated and proposed critical habitat;
- Loss of vegetation (potentially including special status species), disruption of the hydrology of approximately 0.2 acres (0.1 ha) of wetlands and 6.9 acres (2.8 ha) of other waters of the United States within the construction area, or alteration of the habitat for special status species due to construction in wetlands or waters of the United States;
- Loss or damage to special status plant species or habitats, and upland vegetation due to the introduction of seedbed for the invasion of weeds during construction; and
- Mortality of small mammals, reptiles, and other less-mobile species during construction.

Since the proposed Project is privately funded, it is unknown whether the Applicant would fund proceed with another energy project in California; however, should the No Action Alternative be selected, the energy needs identified in Section 1.2, "Project Purpose, Need and Objectives," would likely be addressed through other means, such as through other LNG or natural gas-related pipeline projects. Such proposed projects may result in potential environmental impacts on terrestrial biological resources similar in of the nature and magnitude of to the proposed Project as well as impacts particular to their respective configurations and operations of each project; however, such impacts cannot be predicted with any certainty at this time.

4.8.5.2 Alternative DWP Location – Santa Barbara Channel/Mandalay Shore Crossing/Gonzales Road Pipeline

Environmental Setting

Habitat within the Reliant Energy Mandalay Generating Station area supports a foredune plant community from the near high tide line to approximately 500 feet (152 m)

inland. McGrath Lake on State Park property and the Santa Clara Estuary Natural Preserve are adjacent to the generating station and support a wide range of coastal bird species. The inland area contains willow and dune scrub habitat, and McGrath Lake and the Santa Clara Estuary Natural Preserve support freshwater and brackish wetlands. Several bird species have been observed using the area, including the snowy plover, least tern, snowy egret, cattle egret, killdeer, mallard, lesser scaup, ruddy duck, American coot, canvasback, brown pelican, red-winged black bird, California towhee, house finch, swallows, ring-billed and western gulls, and American kestrel. The park also has exclusion areas to protect nesting snowy plovers.

Two sensitive plant species have been documented in the area. Two populations of the Federal and State endangered Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*) occur in the vicinity of the pipeline ROW. The first population, a wild population, occurs along Harbor Boulevard on the east and west side roughly between Fifth Street and the Edison Canal. A research population occurs at McGrath Beach State Park at the southern end of McGrath Lake between the lake and Harbor Boulevard. The pipeline ROW would be adjacent to both of these plant populations. During the 2005 special status plant survey, no Ventura marsh milk-vetch were found within the ROW.

The second plant species is the CNPS List 4 red sand verbena, which was observed in very low densities within the ROW of the Mandalay shore crossing. The Federal and State endangered salt marsh bird's beak was found within the construction ROW of the Point Mugu Shore Crossing and on NBVC Point Mugu property. It potentially occurs within 1,000 feet (305 m) of the Center Road Pipeline route. Coulter's goldfields, a CNPS List 1B species, was also observed on NBVC Point Mugu property. The Mandalay and Arnold Road Shore Crossings also had occurrences of the red sand verbena.

The metering station would temporarily impact an area approximately 350 feet (107 m) by 350 feet (107 m), and the footprint of the metering station would permanently impact an area approximately 150 feet (46 m) by 150 feet (46 m). The location of the metering station occurs within the wild population of the Ventura marsh milk-vetch. Potential impacts could occur to the red sand verbena.

Since the publication of the October 2004 Draft EIS/EIR, the USFWS has designated critical habitat for the Pacific coast population of the western snowy plover in Ventura County. The Santa Barbara Channel Alternative/Gonzales Road Pipeline at Mandalay Beach would occur within one of the critical habitat subunits. The critical habitat extends 6.1 miles (9.8 km) north along the beach from the north jetty of the Channel Islands harbor to the mouth of the Santa Clara River.

Special status species surveys performed along the pipeline route for the Belding's savannah sparrow, least Bell's vireo, western snowy plover, and California least tern identified suitable habitat for all four species, including nesting habitat. The presence of the least Bell's vireo was not identified within the 2005 survey area. However, the species has been observed in willow thickets associated with McGrath Lake, which is

north of the pipeline ROW. Therefore, because suitable habitat is present along the pipeline ROW and the species has been documented within the Project area, least Bell's vireo is assumed to be present within the ROW.

The State endangered Belding's savannah sparrow may occur within the vicinity of the Center Road Pipeline, Santa Barbara Channel/Gonzalez Alternative ROW. The 2005 survey documented suitable nesting habitat along Harbor Boulevard from east of the dunes until the ROW proceeds east along Gonzales Road (see Figure 4.8-4c above). The western snowy plover and the California least tern have nesting habitat in the vicinity of the ROW along Harbor Boulevard from east of the dunes until the ROW heads east on Gonzales Road. No surveys were conducted for these species during the 2005 survey due to documented presence of breeding birds in the Project vicinity. Because suitable nesting habitat exists in the vicinity of the ROW and both species have been documented nesting along the shoreline, the western snowy plover and California least tern are assumed to be present within the ROW.

Impact Analysis and Mitigation

The primary location along this pipeline route alternative where biological resources could be adversely affected would be the shore crossing. These impacts would be very similar to those for the proposed route's shore crossing regarding potential increases in sedimentation, potential impacts from noxious weed invasion, and potential direct impacts on wildlife mortality. During the HDB procedures to install the pipeline beneath the beach, the impacts would include possible releases of drilling fluids, noise, and light generated by the construction equipment, and disturbance by construction personnel. However, implementation of MM WAT-3a (the HDB Drilling Fluid Release Monitoring Plan; see Appendix D1) would address any impacts associated with a release of drilling fluids on sensitive species and the habitat that supports the species. Impacts associated with construction activities and increased human presence would be mitigated to less than significant by implementing AM TerrBio-2b (Biological Resources Mitigation and Monitoring Plan), AM TerrBio-2c (Employee Environmental Awareness Program), and AM TerrBio-2d (Biological Monitoring). Impacts on the critical habitat of the western snowy plover would not be considered significant. Because HDB would be used across the area designated as critical habitat, no cutting, clearing, and/or removal of vegetation would be necessary for pipeline installation at the shore crossing. Therefore, the snowy plover critical habitat would not be threatened. The mitigation measures identified in Section 4.18, "Water Quality and Sediments," would mitigate impacts caused by potential releases of drilling fluids from HDB.

Timing of construction activities outside the nesting season, for example, for the western snowy plover, would avoid impacts on nesting birds using the beach. Impacts caused by the noise and lights from the construction equipment would not be considered significant because species using the area have become acclimated to the noise and light generated by the operation of the Reliant Energy Mandalay Generating Station.

Construction personnel present could disturb birds nesting along the shoreline by inadvertently walking near or stepping on a nest within the dune. The impacts would be mitigated by implementing AM TerrBio-2c (Employee Environmental Awareness Program).

Natural resources along the remaining portion of the pipeline ROW that could potentially be impacted would include the tree rows. Approximately 3,860 linear feet (1,175 m) of tree rows beginning at MP 6.5 to MP 12 could be removed during construction. The final number of trees that could be removed would be determined once engineering studies are completed; therefore the impacts presented in Table 4.8-6 (page 4.8-133) would be the maximum amount that could be removed. Implementation of MM TerrBio-2g (Tree Avoidance and Replacement) would compensate for any trees that would be removed during construction.

Impacts on sensitive species and their habitats under this alternative shore crossing would be greater than impacts under the proposed Project shore crossing. Impacts under this alternative would include individual loss of red sand verbena (a CNPS List 4 species), placement of the metering station within the wild population of the Federal and State endangered Ventura marsh milk-vetch, and impacts on nesting habitat for the least Bell's vireo and Belding's savannah sparrow. See Table 4.8-12 (page 4.8-150) for ESA Section 7 determinations for Federal listed species potentially present on this alternative. The use of this alternative may require additional consultation with appropriate Federal agencies, and may also require additional surveys prior to construction.

Impacts on jurisdictional wetlands and water features would be less for this alternative than for the proposed route: only five features, totaling 0.30 acres (0.12 ha) of potentially jurisdictional wetlands and 0.38 acres (0.15 ha) of potentially jurisdictional other waters, would be crossed by the alternative route, compared to the 13 features, totaling 0.2 acres (0.1 ha) of potentially jurisdictional wetlands and 6.9 acres (2.8 ha) of potentially jurisdictional other waters that would be crossed by the proposed route (see Table 4.8-2a [page 4.8-98]). One feature, CRALT-2, is not considered jurisdictional and therefore is not included in the total acreage of potentially jurisdictional other waters. This alternative pipeline route would therefore have fewer potential impacts associated with increases in sedimentation.

In comparison to the proposed Center Road Pipeline route, the Gonzales Road Pipeline route alternative crosses through areas that are more developed. Therefore, the pipeline route alternative would have fewer impacts associated with wildlife mortality, noxious weed invasion, and less potential to result in impacts on rare and special status plant species.

4.8.5.3 Alternative Onshore Pipeline Routes

Center Road Pipeline Alternative 1

Center Road Pipeline Alternative 1 would have the same shore crossing location and the same route as the proposed Center Road Pipeline route up to MP 1.3. Implementation of the same measures identified for the proposed Center Road Pipeline route would mitigate impacts on sensitive species and their habitat associated with Ormond Beach.

The remaining route traverses agricultural lands and industrial, commercial, and residential areas. Habitat within the industrial, commercial, and rural residential areas would not support any of the special status species discussed in Section 4.8.1, but may support those common species that are accustomed to a high level of disturbance. The remaining portion of this ROW did not identify any of the special status plant, bird, or animals.

Impact Analysis and Mitigation

Because the shore crossing and route to MP 1.3 would be the same as the proposed route, the potential impacts and mitigation measures for this area would be the same. Adverse impacts on species using the ROW or in the vicinity would be minor and short-term during construction activities. Construction and operation could directly impact species through disturbance, displacement, and possibly mortality. Cutting, clearing, and/or removing existing vegetation within the pipeline ROW would not be considered a significant impact because the pipeline would be installed within a roadway, road shoulder, or agricultural field. If tree rows were removed during construction, replanting would mitigate short-term impacts on species using the tree rows as nesting and roosting habitat. The maximum linear feet of trees that could be affected within the ROW would be 5,660 linear feet (1,725 m) of eucalyptus. See Table 4.8-12 (page 4.8-150) for ESA Section 7 determinations for Federal listed species potentially present on this alternative. The use of this alternative may require additional consultation with appropriate Federal agencies, and may also require additional surveys prior to construction.

Compared to the proposed route, there would be less likelihood for sedimentation and hydrologic disturbance because fewer waterbodies would be crossed. Only 8 potentially jurisdictional wetlands and water features would be crossed, compared with the 13 features traversed by the proposed route (see Table 4.8-2b [page 4.8-99]), resulting in fewer potential impacts on wetlands and waters of the U.S. and rare or special status plant species that may be associated with them. Because this alternative route crosses fewer areas that would support wildlife, such as natural areas or agricultural fields, there would be less likelihood of displacing or causing direct mortality of wildlife during construction or operations, and less vulnerability to impacts associated with noxious weed invasion. Because all the impacts would be relatively similar to those for the proposed route, all the mitigation measures would be the same and have the same effects as described for the proposed route. Implementation of the mitigation

measures as provided in the proposed Project would ensure that impacts would be reduced to levels below the significance criteria.

Center Road Pipeline Alternative 2

Center Road Pipeline Alternative 2 would have the same shore crossing location and the same route as the proposed route up to MP 1.1. This route traverses mainly agricultural lands with limited industrial, commercial, and rural residential occurrences. Habitat within the industrial, commercial, and rural residential areas would not support any of the special status species discussed in Section 4.8.1 but may support those common species that are accustomed to a high level of disturbance. The agricultural land would also provide habitat for those common species as well as wintering waterfowl, wintering burrowing owls, and those species using the tree rows for nesting and roosting. The maximum linear feet of trees that could occur within the ROW would be 1,600 linear feet (488 m) of eucalyptus.

Impact Analysis and Mitigation

Impacts would be similar to those described for the proposed Center Road Pipeline route. The impacts concerning sedimentation would be slightly less because this alternative would cross 11 potentially jurisdictional features, which is two fewer features than the proposed route that would cross 13 potentially jurisdictional features (see Table 4.8-2b [page 4.8-99]). Impacts associated with the shore crossing at Ormond Beach would be similar to the proposed route. The remaining portion of the route would cross similar wildlife habitat, such as the agricultural lands, that supports common wildlife species, and therefore would result in similar vulnerability to impacts on rare and special status plants and from noxious weed invasion. The displacement of wildlife by the cutting and clearing of vegetation along the ROW and possible direct mortality of wildlife during construction activities would be similar to the proposed route. Implementation of the mitigation measures described for the proposed route would ensure that impacts would be less than significant. See Table 4.8-12 (page 4.8-150) for ESA Section 7 determinations for Federal listed species potentially present on this alternative. The use of this alternative may require additional consultation with appropriate Federal agencies, and may also require additional surveys prior to construction.

Center Road Pipeline Alternative 3

Center Road Alternative 3 would be the same as the proposed Center Road pipeline route to approximately MP 12.5. The ROW from MP 0.0 at the shore crossing would be the same as Center Road Pipeline Alternatives 1 and 2. Suitable habitat is present along Center Road Pipeline Alternative 3 for the Belding's savannah sparrow, western snowy plover, and California least tern. The special status plant survey did not identify the presence of any species presented in Table 4.8-3a (page 4.8-104). As discussed in the proposed route, this route would traverse agricultural lands and orchards. Vegetation cover within the agricultural lands is dominated by strawberry crops, ornamental flowers, tomatoes, turf grass, and orchards growing avocado, lemon, and

orange crops. The urban developed land supports no native vegetation cover, only non-native landscape species. The agricultural and urban developed lands along the Center Road Pipeline Alternative 3 ROW support limited wildlife habitat. Wildlife occurring within the ROW are common species accustomed to a high level of human disturbance.

The maximum linear feet of trees that could occur within the ROW would be 2,270.4 linear feet (692 m) of citrus, 9,028.8 linear feet (2,750 m) of avocado, 1,378.08 linear feet (420 m) of eucalyptus, 79.2 linear feet (24 m) of palms, and 744.48 linear feet (227 m) of ornamental species. Final engineering designs would be needed to determine the final location of the route. Once the route has been selected the exact number of trees that would be removed during construction would be finalized.

Impact Analysis and Mitigation

The impacts of this alternative would be similar to those of the proposed Center Road Pipeline route and the mitigation measures would be the same. The impacts would be short-term and would not be considered significant for the species using the area or their habitat. Cutting, clearing, and/or removing existing vegetation within the pipeline ROW would not be considered a significant impact because the pipeline would be installed within a roadway, road shoulder, or agricultural field. If tree rows were removed during construction, replanting would mitigate short-term impacts on species using the tree rows as nesting and roosting habitat. See Table 4.8-12 (page 4.8-150) for ESA Section 7 determinations for Federal listed species potentially present on this alternative. The use of this alternative may require additional consultation with appropriate Federal agencies, and may also require additional surveys prior to construction.

Compared with the proposed route, there would be less likelihood for sedimentation and hydrologic disturbance because only 7 features would be crossed compared to the 13 along the proposed route (see Table 4.8-2b [page 4.8-99]). This route would cross similar areas that support wildlife as the proposed route; therefore, there would be similar likelihood of displacing or causing direct mortality of wildlife during construction or operation, and similar results regarding vulnerability to impacts from noxious weed invasion. Because all the impacts would be relatively similar to those for the proposed route, all the mitigation measures would be the same and have the same effects as described for the proposed route. Implementation of the mitigation measures as provided in the proposed Project would ensure that impacts on terrestrial biological resources would be reduced to levels below the significance criteria.

Line 225 Pipeline Loop Alternative

The Line 225 Pipeline Loop Alternative follows the same route as the proposed Line 225 Pipeline Loop from MP 0.0 to MP 4.8 and MP 6.8 to MP 7.71 of the proposed route. Like the proposed Line 225 Pipeline Loop, the area from the Quigley Valve Station to approximately MP 1.9 has sage scrub habitat with pockets of mulefat scrub and non-native grassland habitat. In addition to the habitat occurring near the Quigley Valve

Station, the northern part of the route north of the Santa Clara River crosses pockets of valley oak woodlands. The main section of the route traverses commercial, residential, and industrial development. Wintering waterfowl and burrowing owls surveys identified potential burrowing owl habitat at MP 0.0 and MP 2.0, and MP 7.0, but no burrowing owls, whitewash, burrows, pellets, feathers, or other signs of burrowing owls were seen. The wintering waterfowl survey was also conducted concurrently with the burrowing owl survey. Seven waterfowl species were identified during the survey (see Table 4.8-4 [page 4.8-113]).

From MP 4.8 to MP 6.3 of this route, in the part of the route that varies from the proposed Line 225 Pipeline Loop route land uses include commercial, residential, industrial, and undeveloped land. Along this portion of the route, the pipeline would traverse areas with potential habitat for several special status flora and fauna species, special status plant communities, and waters of the United States. No special status plant species were identified in the 2005 plant survey (Entrix 2005). As discussed in Section 4.8-4, none of the species identified in the CNDDB were observed within the ROW. Surveys conducted in 2005 found suitable nesting habitat for the least Bell's vireo along the ROW associated with the Santa Clara River and a breeding colony exists approximately 2 miles (3.2 km) downstream of the ROW; therefore, the least Bell's vireo is assumed to be present in the ROW. Surveys were conducted to document the presence of the coastal California gnatcatcher, a federally threatened species and none were detected (Entrix 2005). However, the California gnatcatcher is assumed to be present within the ROW.

Although the arroyo toad, a Federal endangered species, is known to occur in the vicinity of ROW, it was not observed during surveys. However, because it was found upstream of the area where there is suitable habitat, the species is assumed to be present within the ROW.

The western spadefoot toad is a State species of concern. Marginal habitat for the species occurs at MP 5.2 and MP 5.8; however, surveys conducted in June 2005 did not locate any western spadefoot toads. Because only marginal habitat exists within the ROW and no known populations are nearby, the species is not assumed to be present within the ROW.

Construction and operation would be similar to the proposed Line 225 loop pipeline route, and the potential impacts and mitigation measures for this area would be the same. In comparison with the Proposed Line 225 Pipeline Loop, the alternative would cross one fewer wetland feature, but impacts on wetlands and impacts associated with sedimentation would be potentially higher than for the proposed route because total wetland acreage crossed would be higher. Cutting, clearing, and/or removing vegetation within the pipeline ROW would cause initial impacts on species and their habitat. Impacts on the sage scrub, the riparian habitat at the river crossings, and the oak woodlands would be long term, depending upon the success of any required site restoration. These impacts would not be considered significant if the ROW were to be restored to pre-construction conditions.

From approximately MP 5.6 to MP 6, the pipeline route would cross the only recognized habitat for the unarmored threespine stickleback populations in sections of the Santa Clara River. HDD is the proposed method to install the pipeline across this portion of the Santa Clara River to minimize impacts on the habitat. The HDD installation could cause significant impact on the unarmored threespine stickleback populations if a release of drilling fluids occurred within the bed and bank of the river, leading to an increase in turbidity within the water column. Vegetation could be covered by the drilling fluids, causing the vegetation to die and reducing habitat available to the population.

Currently, the CDFG is not issuing permits for “take” of unarmored threespine stickleback within the Santa Clara River. The Applicant would be required to avoid all impacts on this species because of its “fully protected” status. In addition to the mitigation measures identified in Section 4.8.4, “Impact Analysis and Mitigation,” preliminary discussion with the USFWS indicates that the agency would require mitigation measures such as spring surveys for the spineflower, pre-construction surveys for the arroyo toad, and construction monitors with authority to handle and move individuals out of the construction area if they are encountered. Mitigation measures to protect the least Bell’s vireo would be to avoid the nesting season (April 1 to August 15). Measures for the unarmored threespine stickleback would include construction monitors and fish handlers to remove fish within the construction area and/or deter fish from the area by diverting water or installing blocking nets. The final mitigation measures the USFWS would require for the Project will be presented in the BO that will be issued for the Project. Impacts on rare and special status species, vulnerability to impacts associated with noxious weed invasion, and direct impacts associated with wildlife mortality would be similar to the proposed route. See Table 4.8-12 (page 4.8-150) for ESA Section 7 determinations for Federal listed species potentially present on this alternative. The use of this alternative may require additional consultation with appropriate Federal agencies, and may also require additional surveys prior to construction.

4.8.5.4 Alternative Shore Crossings and Pipeline Connection Routes

Arnold Road Shore Crossing/Arnold Road Pipeline

Habitat along the proposed Arnold Road Shore Crossing/Arnold Road Pipeline route includes agricultural fields, freshwater/brackish wetlands, beaches and dunes, and non-tidal salt marshes. In comparison with the proposed shore crossing and pipeline route, the general area of this alternative is less developed and therefore would be more vulnerable to impacts from noxious weed invasion and could have greater impacts associated with wildlife mortality. The Arnold Road Shore Crossing is approximately 1,500 feet (457 m) from the Point Mugu Shore Crossing/Casper Road Pipeline. Each shore crossing has similar biological resources. The Point Mugu Shore Crossing/Casper Road Pipeline discussion below provides a description of the habitats and species that may occur within this shore crossing and pipeline ROW.

The HDB staging area and proposed metering station would be within an agricultural field that would not impact any freshwater/brackish wetlands, beaches and dunes, or non-tidal salt marshes.

Impact Analysis and Mitigation

Impacts on species and their habitat may occur during the HDB procedures to install the pipeline. These impacts could include releases of drilling fluids, noise and light generated by the construction equipment, and disturbance from construction personnel.

Impacts on the freshwater/brackish wetlands, beaches and dunes, and non-tidal salt marshes would not be considered significant if HDB were employed to install the pipeline across the beach because no cutting, clearing, and/or removal of vegetation would be necessary. The proposed metering station for this alternative shore crossing would be located within an agricultural field at the end of Arnold Road, which would avoid impacts on freshwater/brackish wetlands, beaches and dunes, and non-tidal salt marshes. The number of wetland features for this alternative is the same as the proposed Center Road Pipeline (13 features), but potential impacts on wetlands and rare and special status plants associated with them could be greater than the proposed route because, unlike the proposed route, the 13 features are located in the vicinity of the shore crossing. By timing construction activities outside the nesting season, the Project would avoid impacts on nesting birds.

Noise and light generated by the HDB construction procedures could cause a short-term impact on species. The effects could be avoided or reduced if construction activities were conducted outside the nesting season, if biological monitors were on site to determine whether the HDB procedures were affecting species' behaviors, and if Applicant Measures TerrBio-2b, TerrBio-2c, and TerrBio-2d were implemented to minimize temporary impacts.

See Table 4.8-12 (page 4.8-150) for ESA Section 7 determinations for Federal listed species potentially present on this alternative. The use of this alternative may require additional consultation with appropriate Federal agencies, and may also require additional surveys prior to construction.

Point Mugu Shore Crossing/Casper Road Pipeline

The NBVC Point Mugu supports a variety of habitat types such as intertidal mudflats and sandflats, intertidal salt marsh, tidal creeks, salt pannes, beach and dunes, drainage ditches, and developed areas. Specific habitat at the shore crossing includes beaches and dunes, non-tidal salt marsh, salt pannes, developed areas, freshwater/brackish wetlands, and agricultural fields.

NBVC Point Mugu beach and dune habitat supports western snowy plover, California least tern, and globose dune beetle. The NBVC Point Mugu has classified the habitat as characteristic of the native dunegrass and sand verbena beach bursage series, according to Sawyer and Keeler-Wolf (1995). Native plants include dune primrose, sand verbena, beach bursage, and beach morning glory. Non-native species include

1 sea rocket, saltbushes, and ice plant. The dominant plant species within the non-tidal
2 salt marshes include pickleweed and saltgrass.

3 The Federal and State endangered and CNPS List 1B saltmarsh bird's beak was
4 | observed within and in the vicinity of the Mugu shore crossing and on NBVC Point Mugu
5 (see Figure 4.8-4b above). Two other CNPS List species are present at the NBVC
6 Point Mugu—Coulter's goldfields and the red sand verbenas. The red sand verbenas were
7 observed in very low densities in dune habitat at the Arnold Road Shore Crossing.

8 A section of the Point Mugu Shore Crossing alternative between MP 1.15 and MP 1.58
9 northeast of the NBVC Point Mugu property line was excluded from the spring 2005
10 plant surveys because access to the property was not granted by the landowner in time
11 to conduct the survey. The property was included in the summer 2005 survey and
12 survey results documented approximately 26 individual saltmarsh bird's beak plants
13 covering an approximately 587 square-foot (54.5 square meters [m^2] area. No surveys
14 were made of the NBVC Point Mugu property. Surveys conducted by the base in 2003
15 were used to identify the location of saltmarsh bird's beak colonies within the ROW.
16 According to the data, the species occurs within an area of approximately 1,293 square
17 feet (120 m^2) within the Arnold Shore Crossing and Arnold Road Pipeline ROW and
18 within an area of approximately 3,126 square feet (290 m^2) within the Mugu Shore
19 Crossing ROW. Therefore, the total area of the saltmarsh bird's beak population is
20 1,293 square feet (120 m^2) within the Arnold Shore Crossing and 3,712 square feet
21 (345 m^2) within the Mugu Shore Crossing.

22 The salt pannes are within the upper intertidal areas and have vegetation occurring
23 around the perimeter of the shallow basin. The salt pannes at NBVC Point Mugu
24 normally accumulate water during the winter rainfall or at high spring tides. Freshwater
25 from an adjacent duck club provides an additional source of water to the salt pannes.
26 The water slowly evaporates within the pannes and will become salt crusted in the
27 summer. Several birds, such as waterfowl and shorebirds, use the salt pannes for
28 feeding, resting, and nesting. Sensitive species, such as snowy plovers, use the salt
29 pannes during nesting season.

30 The developed habitat at the proposed shore crossing includes a circular concrete pad
31 and outbuildings not currently in use by NBVC Point Mugu. The concrete pad would be
32 used as a staging area for offshore and inland HDB to complete the installation of the
33 | pipelines. Once the installation is complete, NBVC Point Mugu may require that the
34 concrete pad be removed in order to restore the area.

35 The HDB drilling rig and staging area would be set up on the concrete pad, which is
36 approximately 600 feet (183 m) in diameter. One entry pit would be excavated into the
37 concrete pad that will be used for the offshore and inland HDB entry point. The intent of
38 using the HDB technology is to minimize impacts on the sensitive species and their
39 habitat present at NBVC Point Mugu.

40 The freshwater/brackish wetlands occur within a privately owned duck club north of the
41 NBVC Point Mugu property. The duck club has constructed ponds that are flooded with

freshwater to attract waterfowl. The individual ponds are bermed to contain the water and have either vehicle access roads or footpaths along the berms. The dominant freshwater plant species would include cattails, bulrushes, and various *Juncus* and *Carex* species. Sensitive species within the duck club include populations of salt marsh bird's-beak.

The proposed metering station would be located within an agricultural field currently producing turf-grass; no native vegetation is present. Wildlife using the area would be those common species discussed in Section 4.8.1.

The pipeline route is surrounded by agricultural fields producing a variety of crops. Wildlife using the area would be those common species discussed in Section 4.8.1, "Environmental Setting."

Impact Analysis and Mitigation

Impacts on species and their habitat would be similar to those of the Arnold Road Shore Crossing because the Point Mugu Shore Crossing essentially would cross the same area. However, the proposed metering station would be located in an agricultural field at the southern end of Casper Road. In addition, the total length of the HDB would be longer than the Arnold Road Shore Crossing, which could impact more freshwater/brackish wetlands, beaches and dunes, and non-tidal salt marshes if a release of drilling fluids were to occur. In comparison with the proposed shore crossing and pipeline route, the general area of this alternative is less developed and therefore would be more vulnerable to impacts from noxious weed invasion and could have greater impacts associated with wildlife mortality.

Because HDB would be used to install the pipeline beneath the beach, no cutting, clearing, and/or removal of vegetation would be necessary, and impacts on the freshwater/brackish wetlands, beaches and dunes, and non-tidal salt marshes would not be considered significant. The number of wetland features for this alternative is less than the proposed Center Road Pipeline (10 versus 13 features), but potential impacts on wetlands and rare and special status plants associated with them could be greater than the proposed route because, unlike the proposed route, all of these features are located in the vicinity of the shore crossing. The proposed metering station would be located within an agricultural field, which would avoid impacts on freshwater/brackish wetlands, beaches and dunes, and non-tidal salt marshes. Timing of construction activities outside the nesting season would avoid impacts on nesting birds.

Noise and light generated by the HDB construction procedures would cause a short-term impact on species. The effects could be avoided or reduced if construction activities were conducted outside the nesting season and if biological monitors were to observe species using the area during construction to determine whether the HDB procedures were affecting the species' behaviors. If species were impacted by the HDB procedures, implementation of Applicant Measures TerrBio-2b, TerrBio-2c, and TerrBio-2d would minimize temporary impacts.

Removal of the concrete pad could impact the saltmarsh bird's beak populations that have been identified along the parameter of the concrete pad (see Figure 4.8-4b above). The footprint of the former concrete pad would be restored, and the existing habitat that supported the saltmarsh bird's beak population would be expanded. Consultation with the USFWS would be required before the removal of the concrete pad could be completed. See Table 4.8-12 (page 4.8-150) for ESA Section 7 determinations for Federal listed species potentially present on this alternative. The use of this alternative may require additional consultation with appropriate Federal agencies, and may also require additional surveys prior to construction.

A potential blowdown would be considered an infrequent or unlikely event. However, if it occurred, there would be the potential for disturbance of birds at a nearby duck club. If it occurred, the disturbance would be considered a minor and short-term adverse impact on the waterfowl at the duck club.

4.8.6 References

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Table 4.8-1 Vegetation Communities along the Center Road Pipeline and Its Alternatives

MP	MP	Center Road Pipeline	Alternative 1	Alternative 2	Alternative 3	Arnold Road Alternative	Point Mugu Alternative	Santa Barbara Channel Alternative
0	1	Southern Foredune, Developed Land, Agricultural Land	Southern Foredune, Developed Land, Agricultural Land	Southern Foredune, Developed Land, Agricultural Land	Southern Foredune, Developed Land, Agricultural Land	Southern Foredune, Developed Land, Agricultural Land	Southern Foredune, Developed Land, Agricultural Land	Southern Foredune, Developed Land
1	2	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land
2	3	Agricultural Land, Developed Land	Developed Land, Tree Row	Agricultural Land, Developed Land	Agricultural Land, Developed Land	Agricultural Land, Developed Land	Agricultural Land, Developed Land	Agricultural Land, Developed Land
3	4	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land
4	5	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land
5	6	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Non-Native Grassland, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land
6	7	Agricultural Land	Agricultural Land, Developed Land	Agricultural Land	Agricultural Land	Agricultural Land	Agricultural Land	Agricultural Land, Developed Land
7	8	Developed Land, Agricultural Land	Developed Land, Non-Native Grassland	Agricultural Land, Developed Land	Developed Land, Agricultural Land	Developed Land, Agricultural Land	Developed Land, Agricultural Land	Agricultural Land, Developed Land
8	9	Developed Land, Agricultural Land	Developed Land, Non-Native Grassland, Agricultural Land	Agricultural Land, Developed Land	Developed Land, Agricultural Land	Developed Land, Agricultural Land	Developed Land, Agricultural Land	Developed Land, Non-Native Grassland, Agricultural Land
9	10	Agricultural Land, Developed Land	Developed Land, Agricultural Land, Tree Row	Agricultural Land, Developed Land	Agricultural Land, Developed Land	Agricultural Land, Developed Land	Agricultural Land, Developed Land	Developed Land, Agricultural Land, Tree Row
10	11	Agricultural Land, Developed Land	Agricultural Land, Developed Land, Tree Row	Agricultural Land, Developed Land	Agricultural Land, Developed Land	Agricultural Land, Developed Land	Agricultural Land, Developed Land	Agricultural Land, Developed Land, Tree Row

Table 4.8-1 Vegetation Communities along the Center Road Pipeline and Its Alternatives

MP	MP	Center Road Pipeline	Alternative 1	Alternative 2	Alternative 3	Arnold Road Alternative	Point Mugu Alternative	Santa Barbara Channel Alternative
11	12	Agricultural Land, Developed Land	Agricultural Land, Non-Native Grassland, Developed Land, Tree Row	Agricultural Land, Developed Land	Agricultural Land, Developed Land	Agricultural Land, Developed Land	Agricultural Land, Developed Land	Agricultural Land, Non-Native Grassland, Developed Land, Tree Row
12	13	Agricultural Land, Exotic Mixed Riparian Forest	Agricultural Land, Developed Land	Agricultural Land, Exotic Mixed Riparian Forest	Agricultural Land, Developed Land	Agricultural Land, Exotic Mixed Riparian Forest	Agricultural Land, Exotic Mixed Riparian Forest	Agricultural Land, Developed Land
13	14	Agricultural Land, Exotic Mixed Riparian Forest	Agricultural Land, Exotic Mixed Riparian Forest	Agricultural Land, Exotic Mixed Riparian Forest	Agricultural Land, Exotic Mixed Riparian Forest	Agricultural Land, Exotic Mixed Riparian Forest	Agricultural Land, Exotic Mixed Riparian Forest	Agricultural Land, Exotic Mixed Riparian Forest
14	End	Agricultural Land	Agricultural Land	Agricultural Land	Agricultural Land	Agricultural Land	Agricultural Land	Agricultural Land
14	End	Center Road Valve Station Expansion	Agricultural Land	Agricultural Land	Agricultural Land	Agricultural Land	Agricultural Land	Agricultural Land

Table 4.8-2a Acres of Potential Jurisdictional Wetland and Waters Affected along the Proposed Center Road Pipeline, Proposed Line 225 Loop Pipeline and their Alternatives

Name of Proposed Route or Alternative	Total Section 10 Waters	Total Section 404 Wetland (acres)	Total Section 404 Other Waters (acres)	Total Potential Section 404 Jurisdictional Features (acres)	Total Number of Features (see Table 4.8-2b)
Proposed Center Road Pipeline	112.2 acres of ocean waters	0.2	6.9 ^a	7.1	13
Center Road Pipeline Alternative 1	112.2 acres of ocean waters	0.5	2.7	3.1	8
Center Road Pipeline Alternative 2	112.2 acres of ocean waters	4.0	6.0	10.0	11
Center Road Pipeline Alternative 3	112.2 acres of ocean waters	3.8	5.7	9.4	7
Arnold Road Shore Crossing/Arnold Road Pipeline	723.0 cubic yards of ocean waters; 71.2 cubic yards of tidal waters; 7.0 acres of tidal waters	1.5	0	1.5	13
Point Mugu Shore Crossing/Casper Road Pipeline ^b	710.5 cubic yards of ocean waters	0	0	0	10
Santa Barbara Channel Alternative/Mandalay Shore Crossing/Gonzales Road Pipeline	698.6 acres of ocean waters	0.4	0.3	0.7	5
Proposed Line 225 Pipeline Loop ^c	0	0.0	1.0	1.0	8
Line 225 Pipeline Loop Alternative ^{d,e}	0	3.6	1.9	5.5	7

Notes:

^a One feature, CRALT-2 (0.19 acres), is not considered jurisdictional; therefore its acreage is not included in the total acreage of potentially jurisdictional other waters.

^b MUGUX-2 through MUGUX-9 would not be impacted by HDB activities; therefore, acreages are not included in the total acreage of tidal waters and potentially jurisdictional wetlands.

^c Acres for features L-1, L-2 and L-3 were not included in acres affected. Pipeline across the South Fork Santa Clara River (L-1) would be installed within an existing closed girder bridge. The pipeline across the Santa Clara River (L-2) and San Francisquito Creek (L-3) would be installed by hanging it underneath existing open girder bridges. Pending final engineering design, HDD may be used to cross the Santa Clara River. No equipment would enter the waterbody channel during these waterbody crossings. See Section 2.7.2.1.

^d Acres for feature L-1 were not included in acres affected. Pipeline across the South Fork Santa Clara River (L-1) would be installed within an existing closed girder bridge.

^e The Line 225 Pipeline Loop route alternative could cross the Santa Clara River (L-4) on an existing pipe bridge (250-foot ROW) or using HDD. Maximum possible acres affected are reported, but pending final engineering design, acres affected could be reduced.

Table 4.8-2b Potential Jurisdictional Wetland and Waterbody Sites Delineated for the Proposed and Alternative Pipeline Routes

Site Number	Waterbody	Milepost	Section 10 Waters	Acres of Other Waters of the United States	Acres of Wetlands
Proposed Center Road Pipeline					
PrefX-0	Section 10 Pacific Ocean	--	112.22 acres of ocean waters	0	0
CR-1	Tributary to Pacific Ocean	0.2	0	0	0.17
CR-2	Nyeland Drain	9.5	0	0.16	0
CR-3/CR-4 ^a	Beardsley Wash	10.5	0	0.58	0
CR-13	Santa Clara Diversion	11.4	0	3.10	0
CR-14	Santa Clara Drain	12	0	2.04	0
CR-15	Santa Clara Drain	12.5	0	0	0.02
CR-8	Los Angeles Drain	12.6	0	0.35	0
CR-7	Ferro Ditch	12.7	0	0	0.04
CR6A/CR6B	Unnamed Agricultural Drain	13	0	0	0.003
CRA1T-1	Unnamed Agricultural Drain	13	0	0.56	0
CRA1T-2 ^b	Unnamed Agricultural Pond	14.1	0	0.19	0
CRA1T-3	Unnamed Agricultural Drain	14.2	0	0.07	0
Center Road Alternative 1					
PrefX-0	Section 10 Pacific Ocean	--	112.22 acres of ocean waters	0	0
CR-1	Tributary to Pacific Ocean	0.2	0	0	0.17
CR-16	Oxnard Industrial Drain	1.7	0	0.06	0
CR-17	Rice Road Drain	1.8	0	2.24	0
CR-6A/CR-6B ^a	Unnamed Agricultural Drain	12.8	0	0	0.26
CR-7	Ferro Ditch	13.1	0	0	0.04

Table 4.8-2b Potential Jurisdictional Wetland and Waterbody Sites Delineated for the Proposed and Alternative Pipeline Routes

Site Number	Waterbody	Milepost	Section 10 Waters	Acres of Other Waters of the United States	Acres of Wetlands
CR-8	Los Angeles Drain	13.2	0	0.35	0
CR-5	La Vista Drain	14.5	0	0.03	0
Center Road Alternative 2					
PrefX-0	Section 10 Pacific Ocean	--	112.22 acres of ocean waters	0	0
CR-1	Tributary to Pacific Ocean	0.2	0	0	0.17
CR-9	Mugu Drain	6.4	0	0	0.17
CR-10	Tributary to Revolon Slough	7.5	0	0	0.05
CR-11	Tributary to Revolon Slough	8	0	0.15	0
CR-12	Revolon Slough	8.4	0	0.22	0
CR-3/CR-4 ^a	Beardsley Wash	10.1	0	0.48	0
CR-13	Santa Clara Diversion	10.8	0	3.10	0
CR-14	Santa Clara Drain	11.5	0	2.04	0
CR-15	Santa Clara Drain	11.9	0	0	3.59
CR-5	La Vista Drain	13.4	0	0.03	0
Center Road Pipeline Alternative 3					
PrefX-0	Section 10 Pacific Ocean	--	112.22 acres of ocean waters	0	0
CR-1	Tributary to Pacific Ocean	0.2	0	0	0.17
CR-3/CR-4 ^a	Beardsley Wash	10.5	0	0.48	0
CR-13	Santa Clara Diversion	11.4	0	3.10	0
CR-14	Santa Clara Drain	12	0	2.04	0
CR-15	Santa Clara Drain	12.4	0	0	3.59
CR-5	La Vista Drain	13.8	0	0.03	0
Santa Barbara Channel Alternative/Mandalay Shore Crossing/Gonzales Road Pipeline					
MANDX-0	Pacific Ocean	0.0 – 0.57	698.6 acres of ocean waters	0	0

Table 4.8-2b Potential Jurisdictional Wetland and Waterbody Sites Delineated for the Proposed and Alternative Pipeline Routes

Site Number	Waterbody	Milepost	Section 10 Waters	Acres of Other Waters of the United States	Acres of Wetlands
CR-6A/CR-6B ^a	Unnamed Agricultural Drain	12.8	0	0	0.26
CR-7	Ferro Ditch	13.1	0	0	0.04
CR-8	Los Angeles Drain	13.2	0	0.35	0
CR-5	La Vista Drain	14.5	0	0.03	0
Point Mugu Shore Crossing and Casper Road Pipeline					
MUGUX-0	Pacific Ocean	--	710.46 cubic yards ocean waters	0	0
MUGUX-1	Tidal Waters	--	New proposed HDB route does not cross	0	0
MUGUX-2 ^c	Tidal Waters	--	151.19 cubic yards	0	0
MUGUX-3 ^c	Tidal Waters	--	61.40 cubic yards	0	0
MUGUX-4 ^c	Tidal Waters	--	101.41 cubic yards	0	0
MUGUX-5 ^c	Tidal Waters	--	6.51 cubic yards	0	0
MUGUX-6 ^c	Tidal Waters	--	541.01 cubic yards	0	0
MUGUX-7 ^c	Unnamed Agricultural Drain	0	0	0	0.003
MUGUX-8 ^c	Unnamed Agricultural Pond	0	0	0	0.02
MUGUX-9 ^c	Unnamed Agricultural Drain	0	0	0	0.02
Arnold Road Shore Crossing and Arnold Road Pipeline					
ARNX-0	Pacific Ocean (HDB Exit to MHW)	--	722.96 cubic yards ocean water	0	0
ARNX-1	Tidal Waters	--	71.17 cubic yards	0	0
Arnold Road Shore Crossing HDB Staging Area	Tidal Waters	--	3.15	0	0
ARN-1	Tidal Waters	--	1.0	0	0
ARN-2	Tidal Waters	--	0.62	0	0

Table 4.8-2b Potential Jurisdictional Wetland and Waterbody Sites Delineated for the Proposed and Alternative Pipeline Routes

Site Number	Waterbody	Milepost	Section 10 Waters	Acres of Other Waters of the United States	Acres of Wetlands
ARN-3	Tidal Waters Mugu Lagoon Canal (Oxnard Drain)	--	0.30	0	0
ARN-4	Tidal Waters	--	0.12	0	0
ARN-5	Tidal Waters	--	0.12	0	0
ARN-6	Tidal Waters	--	0.99	0	0
ARN-7	Unnamed Agricultural Drain	0.4	0	0	0.16
ARN-8	Unnamed Agricultural Drain	0.3	0	0	1.29
ARN-9	Tidal Waters	--	0.71	0	0
ARN-10	Unnamed Agricultural Drain/Pond	0.4	0	0	0.07
Proposed Line 225 Loop Pipeline					
L-9	Oro Fino Canyon	0.7	0	0.06	0
L-8	Unnamed Tributary to South Fork Santa Clara River	1.0	0	0.11	0
L-7	Oakdale Canyon	1.8	0	0.76	0
L-6	Unnamed Tributary to Oakdale Canyon	1.7	0	0.06	0
L-5	Unnamed Flood Control Channel	2.4	0	0.01	0
L-1 ^d	South Fork Santa Clara River	3.7	0	1.97	1.46
L-2 ^d	Santa Clara River	5.2	0	4.64	1.32
L-3 ^d	San Francisquito Creek	5.6	0	0.11	1.04
Line 225 Pipeline Loop Alternative					
L-9	Oro Fino Canyon	0.7	0	0.06	0

Table 4.8-2b Potential Jurisdictional Wetland and Waterbody Sites Delineated for the Proposed and Alternative Pipeline Routes

Site Number	Waterbody	Milepost	Section 10 Waters	Acres of Other Waters of the United States	Acres of Wetlands
L-8	Unnamed Tributary to South Fork Santa Clara River	1.0	0	0.11	0
L-7	Oakdale Canyon	1.8	0	0.76	0
L-6	Unnamed Tributary to Oakdale Canyon	1.7	0	0.06	0
L-5	Unnamed Flood Control Channel	2.4	0	0.01	0
L-1 ^e	South Fork Santa Clara River	3.7	0	1.97	1.46
L-4	Santa Clara River	5.7	0	0.93 ^f 0 ^g	3.57 ^f 2.88 ^g

Notes:

^a Counted as two features in potential jurisdictional features totals within text.

^b One feature, CRALT-2, is not considered jurisdictional; therefore its acreage is not included in the total acreage of potentially jurisdictional other waters.

^c MUGUX-2 through MUGUX-9 would not be impacted by HDB activities; therefore, acreages are not included in the total acreage of tidal waters and wetlands presented in Table 4.8-2a

^d Pipeline across the South Fork Santa Clara River (L-1) would be installed within an existing closed girder bridge. The pipeline across the Santa Clara River (L-2 and L-4) and San Francisquito Creek (L-3) would be installed by hanging it underneath existing open girder bridges. No equipment would enter the waterbody channel during these waterbody crossings. Therefore, acreages are not included in the total acreage of other waters and wetlands presented in Table 4.8-2a.

^e Acres for feature L-1 were not included in acres affected in Table 4.8-2a. Pipeline across the South Fork Santa Clara River (L-1) would be installed within an existing closed girder bridge.

^f Acres represent route for which HDD construction method would be used. The Line 225 Pipeline Loop route alternative could cross the Santa Clara River (L-4) on an existing pipe bridge (250-foot ROW) using HDD. Maximum possible acres affected are reported here and in Table 4.8-2a, but pending final engineering design, acres affected could be reduced.

^g Acres represent route through which the open cut trenching construction method would be used. This method is no longer being considered because of potential effects on unarmored threespine stickleback (see Section 4.8.1.3).

Table 4.8-3a Special Status Plant Species Potentially Occurring in the Vicinity of the Center Road Pipeline in the Oxnard Plain and Coastal Zone

Scientific Name Common Name	Listing Status	Growth Form	Flowering Period	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination
Federal Listed Species Identified by the USFWS^a						
<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i> Ventura marsh milk-vetch	FE, CE, CNPS 1B	perennial herb	June-October	Coastal salt marsh. Within reach of high tide or protected by barrier beaches, more rarely near seeps on sandy bluffs. 1 to 35 m.	Has the potential to occur in coastal salt marsh in the Project vicinity. Known populations of this species occur in the vicinity of the Santa Barbara Channel Alternative/Gonzales Road Pipeline. During the 2005 survey, no species were observed within the ROWs.	May affect but not likely to adversely affect
<i>Cordylanthus maritimus</i> ssp. <i>maritimus</i> salt marsh bird's-beak	FE, CE, CNPS 1B	annual herb, hemiparasitic	May-October	Coastal salt marsh, coastal dunes. Limited to the higher zones of the salt marsh habitat. 0 to 30 m.	Has the potential to occur in coastal salt marsh and dune habitats in the Project vicinity. There are known occurrences of this species near the proposed route and NBVC Point Mugu.	May affect but not likely to adversely affect
State Listed Species^b						
<i>Abronia maritima</i> Red sand verbena	CNPS List 4	perennial herb	Feb-Oct	Coastal dune habitat.	The 2005 surveys observed the species in dune habitat at the Mandalay and Arnold Road Shore Crossings Alternatives. Low species density was observed during the 2005.	Not applicable
<i>Aphanisma blitoides</i> Aphanisma	CNPS 1B	annual herb	Mar-Jun	Coastal bluff scrub, coastal dunes, coastal scrub. Sandy sites. Found at elevation 1 to 305 m.	Species has the potential to occur within coastal dune habitat. No species were observed during the 2005 survey.	Not applicable
<i>Atriplex pacifica</i> South coast saltscale	CNPS 1B	annual herb	Mar-Oct	Coastal bluff scrub, coastal dunes, coastal scrub, and playas. 0 to 140 m.	Habitat for the species does not occur within the Project vicinity. Therefore, species presence is unlikely. No species were documented during the 2005 survey.	Not applicable

Table 4.8-3a Special Status Plant Species Potentially Occurring in the Vicinity of the Center Road Pipeline in the Oxnard Plain and Coastal Zone

Scientific Name Common Name	Listing Status	Growth Form	Flowering Period	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination
<i>Chaenactis glabriuscula</i> var. <i>Orcuttiana</i> Orcutt's pincushion	1B	annual herb	January-August	Coastal bluff scrub and coastal dunes.	Has the potential to occur in the coastal dune areas in the Project vicinity. Species has been documented in areas north of Port Hueneme. No individuals were observed during the 2005 survey.	Not applicable
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	CNPS 1B	annual herb	February-June	Coastal salt marshes and swamps, playas, valley and foothill grassland, vernal pools. Usually on alkaline soils in playas, sinks and grasslands. 1 to 1,400 m.	Has the potential to occur within coastal salt marsh habitat in the Project vicinity. There is a known occurrence of this species near MP 0.0 of the Project Route. The species is documented at NBVC at Pont Mugu.	Not applicable
<i>Suaeda esteroa</i> Estuary seablite	CNPS 1B	perennial herb	May-Oct	Coastal salt marshes and swamps. 0 to 5 m.	During the 2005 survey no species were found.	Not applicable

^a USFWS 2005.^b California Department of Fish and Game 2004.**Notes:**

Consultations with USFWS and NOAA Fisheries are ongoing.

FC = Federal candidate species for listing; FT = federally listed as threatened; FE = federally listed as endangered; CR = listed by California as Rare;

CE = listed by California as endangered; CNPS = California Native Plant Society; 1A = presumed extinct in California; 1B = rare, threatened, or endangered in California and elsewhere; 2 = rare in California but more common elsewhere.

Table 4.8-3b Special Status Wildlife Species Potentially Occurring in the Vicinity of the Center Road Pipeline in the Oxnard Plain and Coastal Zone

Scientific Name Common Name	Listing Status	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination
Federal Listed Species Identified by the USFWS^a				
<i>Eucyclogobius newberryi</i> Tidewater goby	FE, CSC	Brackish water habitats along the California coast, in shallow lagoons, and lower stream reaches. Need fairly still but not stagnant water and high oxygen levels.	Reported from Calleguas Creek, the Santa Clara River estuary, the Oxnard Drain, and the “J” Street Canal at Ormond Beach in the Project vicinity. Potential to occur in drainage at Ormond Beach Generating Station (MP 0.2).	May affect but not likely to adversely affect
<i>Onchornchus mykiss irideus</i> Southern steelhead	FE, Southern California ESU	Freshwater species		May affect but not likely to adversely affect
<i>Gasterosteus aculeatus williamsoni</i> Unarmored threespine stickleback	FE, CE	Freshwater species	No documented species or suitable habitat for this species is traversed by the Center Road Pipeline.	Not likely to adversely affect for the proposed Center Road Pipeline (see Table 4.8-9b)
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	FC, CE	Nesting along river systems with riparian vegetation.	Potential to occur within the Project area. Has been documented at the mouth of the Santa Clara River.	May affect but not likely to adversely affect
<i>Charadrius alexandrinus nivosus</i> Western snowy plover	FT, CSC	Sandy beaches, salt pond levees, and shores of large alkali lakes. Winters and breeds along beaches of the eastern Pacific to British Columbia. Needs sandy, gravelly, or friable soils for nesting.	Reported as nesting in a dune-backed beach in Project vicinity. Suitable habitat for this species exists within the Project area. Nesting occurs at NBCV Point Mugu, Mandalay Beach, and Ormond Beach. Critical habitat designated at Ormond Beach and Mandalay Beach.	May affect but not likely to adversely affect
<i>Poliioptila californica</i> Coastal California gnatcatcher	FT, CSC	Local, uncommon, obligate resident of arid coastal scrub below 1,500 feet (457 m) from eastern Orange and southwestern Riverside counties, south through the coastal foothills of San Diego County along the immediate coast at Palos Verdes Peninsula, Los Angeles County, and in the Tijuana River Valley, San Diego County.	Potential for nesting and foraging in vegetated areas adjacent to the Project area, but no suitable habitat crossed by the Center Road Pipeline.	May affect but not likely to adversely affect

Table 4.8-3b Special Status Wildlife Species Potentially Occurring in the Vicinity of the Center Road Pipeline in the Oxnard Plain and Coastal Zone

Scientific Name Common Name	Listing Status	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination
<i>Pelecanus occidentalis</i> Brown pelican	FE, CE	Sandy coastal beaches and lagoons, waterfronts and pilings, and rocky cliffs.	Potential for foraging within the Project vicinity. Reported from Point Mugu to Ormond Beach.	May affect but not likely to adversely affect
<i>Sterna antillarum browni</i> California least tern	FE, CE, CFP	Nests at isolated beaches near bays and lagoons, San Francisco Bay to northern Baja California. Forages in estuaries. Colonial breeder on bare or sparsely vegetated flat substrates, sand beaches, alkali flats, landfills, or paved areas.	Potential to occur in the Project vicinity at Ormond Beach and Point Mugu Naval Air Station. Observed nesting at Ormond Beach and Point Mugu Naval Air Station.	May affect but not likely to adversely affect
State Listed Species^b				
Insects				
<i>Coelus globosus</i> Globose dune beetle	CSC	Inhabitant of coastal sand. Inhabits foredunes and sand dune habitat.	Potential to occur within Ormond Beach, Mandalay Beach, and NBVC Point Mugu.	Not applicable
<i>Cincindela hirticollis gravida</i> sandy beach tiger beetle	FSC	Adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico. Clean, dry, light-colored sand in the upper intertidal zone. Subterranean larvae prefer moist sand not affected by wave action.	Not likely to occur due to lack of appropriate habitat within the Project area. Reported at depressions in the dunes at NBVC Point Mugu.	Not applicable
<i>Panoquina errans</i> Wandering saltmarsh skipper	CSC	Inhabits coastal lagoons and salt marshes.	Potential to occur in the vicinity of NBVC Point Mugu.	Not applicable
Mollusks				
<i>Tyronia imitator</i> California brackishwater snail	CSC	Inhabits coastal lagoons; found only in permanent estuaries and salt marshes and submerged areas with a wide range of salinities.	Potential to occur at Ormond Beach, Mandalay Beach, and NBVC Point Mugu.	Not applicable
Fish				
<i>Gila orcutti</i> Arroyo chub	CSC	Slow water stream sections with mud or sand bottoms. Feed heavily on aquatic vegetation and associated invertebrates.	Low potential to occur within the Project area.	Not applicable

Table 4.8-3b Special Status Wildlife Species Potentially Occurring in the Vicinity of the Center Road Pipeline in the Oxnard Plain and Coastal Zone

Scientific Name Common Name	Listing Status	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination
Reptiles				
<i>Clemmys marmorata pallida</i> Southwestern pond turtle	FSC, CSC	Permanent or nearly permanent bodies of water in many habitat types; below 6,000 feet (1,829 m) elevation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks.	Potential for occurrence within perennial waterbodies within the Project area. Species is present at NBVC Point Mugu.	Not applicable
<i>Phrynosoma coronatum blainvillei</i> San Diego Coast horned lizard	CSC	Inhabits coastal sage scrub and chaparral in arid and semi-arid climate conditions. Prefers rocky or shallow sandy soils.	Potential for occurrence within the Project area. Has been observed near the Santa Clara River.	Not applicable
Birds				
<i>Accipiter cooperi</i> Cooper's hawk	CSC	A breeding resident throughout most of the wooded part of the State in dense stands of live oak, riparian deciduous, or other forest habitats near water. Ranges from sea level to above 9,000 feet (2,743 m)	Potential for nesting and foraging within woodland habitat within the Project area and tree rows throughout the Center Road Pipeline Route. Species occurs at NBVC Point Mugu.	Not applicable
<i>Agelaius tricolor</i> Tricolored blackbird	CSC	Marshes, wetlands, and open fields.	Potential for occurrence during the winter months. Species occurs at NBVC Point Mugu.	Not applicable
<i>Aimophila ruficeps canescens</i> Southern California rufous-crowned sparrow	FSC, CSC	Coastal sage scrub.	Potential to occur within the Project area.	Not applicable
<i>Athene cunicularia hypugaea</i> Western burrowing owl	FSC, CSC	Open, dry, annual, or perennial grasslands, deserts, and scrublands characterized by low growing vegetation. Subterranean nester dependent upon burrowing mammals to provide nesting burrows.	Potential for nesting and foraging within agricultural lands and non-native grassland in the Oxnard Plain. Reported from south of McGrath State Beach campgrounds, in the Project vicinity. Occasionally observed at NBVC Point Mugu during winter.	Not applicable
<i>Buteo regalis</i> Ferruginous hawk	FSC, CSC	Grasslands and agricultural fields.	Potential to occur within the Project area. Has been observed at Mugu Lagoon.	Not applicable

Table 4.8-3b Special Status Wildlife Species Potentially Occurring in the Vicinity of the Center Road Pipeline in the Oxnard Plain and Coastal Zone

Scientific Name Common Name	Listing Status	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination
<i>Chlidonias niger</i> Black tern	FSC, CSC	Winters off the coast of northwestern South America. Spring migration takes place in April and May, and fall migration extends from late June through September, but stragglers have been reported in all months in California. Mostly breeds on wetlands of the northeastern plateau. Can be common on bays, salt ponds, river mouths, and pelagic waters in spring and fall migration.	Unlikely to occur, although black terns may potentially migrate through the Oxnard Plain during spring and fall. Suitable habitat for this species does not exist within the Project area. Species has been observed at Point Mugu Naval Air Station.	Not applicable
<i>Dendroica petechia brewsteri</i> Yellow warbler	CSC	Riparian and woodland habitat.	Potential for occurrences at the mouth of the Santa Clara River.	Not applicable
<i>Eremophila alpestris actia</i> California horned lark	CSC	Stubble, grass and fallow lands near cultivated fields. Also deserts, foothills and dry grasslands surrounding cultivated fields.	Potential for occurrence as CNDDDB has records within 1.5 mi east of the proposed ROW.	Not applicable
<i>Falco peregrinus anatum</i> American peregrine falcon	FD, FSC, CE, CFP	Nests near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds, and human-made structures. Migrants occur along the coast and in the western Sierra Nevada in spring and fall.	Potential for occurrence as migrants during the fall and spring within the Project area. Occurrences at NBVC Point Mugu.	Not applicable
<i>Falco mexicanus</i> Prairie falcon	CSC	Grasslands, agricultural fields, scrub habitat, cliff faces.	Potential for occurrence as migrants during the winter within the Project area.	Not applicable

Table 4.8-3b Special Status Wildlife Species Potentially Occurring in the Vicinity of the Center Road Pipeline in the Oxnard Plain and Coastal Zone

Scientific Name Common Name	Listing Status	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination
<i>Icteria virens</i> Yellow-breasted chat	CSC	An uncommon summer resident and migrant in coastal California and in foothills of the Sierra Nevada. Found up to 4,800 feet (1,463 m) in valley foothill riparian, and up to 6,500 feet (1,981 m) east of the Sierra Nevada in desert riparian habitats. In southern California, breeds locally on the coast and very locally inland in riparian woodlands.	Potential for nesting and foraging within riparian habitat in the Project area.	Not applicable
<i>Larus californicus</i> California gull	CSC	Colonial nester on islets in large interior lakes, either fresh or strongly alkaline. Preferred habitats along the coast are sandy beaches, mudflats, rocky intertidal, and pelagic areas of marine and estuarine habitats as well as fresh and saline emergent wetlands.	There is the potential for gulls to migrate through the Project site in the Oxnard Plain. Occurrences at NBVC Point Mugu.	Not applicable
<i>Laterallus jamaicensis coturniculus</i> California black rail	FSC, CT, CFP	Mainly inhabits salt-marshes bordering larger bays. Occurs in tidal salt marsh with heavily grown pickleweed; also in freshwater and brackish marshes, all at low elevation.	Suitable habitat for this species exists within Point Mugu Naval Air Station.	Not applicable
<i>Numenius americanus</i> Long-billed curlew	FSC, CSC	Uncommon to common breeder from April to September in wet meadow habitat in northeastern California. Uncommon to locally common as a winter visitor from July to April along the coast and in the Central and Imperial valleys.	Uncommon but has the potential to occur as a winter visitor within irrigated agricultural fields within the Project area in the Oxnard Plain. Occurrences at NBVC Point Mugu.	Not applicable

Table 4.8-3b Special Status Wildlife Species Potentially Occurring in the Vicinity of the Center Road Pipeline in the Oxnard Plain and Coastal Zone

Scientific Name Common Name	Listing Status	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination
<i>Passerculus sandwichensis</i> Belding's savannah sparrow	CE	Common but local permanent residents associated with pickleweed habitat, restricted to coastal salt marshes from southern Santa Barbara County to San Diego County.	Potential for nesting and foraging within Project vicinity. Reported from Mugu Lagoon. Also reported from Ormond Beach wetlands in a small patch of marsh between the power plant and the northwest fence line.	Not applicable
<i>Phalacrocorax auritus</i> Double-crested cormorant	CSC	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state. Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins. A yearlong resident along the entire coast of California and on inland lakes, in fresh, salt, and estuarine waters.	Potential for occurrence within the Project area as a transient visitor, but appropriate foraging and nesting habitat is not present within the Project area. Reported from the Project vicinity. Potential to occur in the waterway at the entrance of the Ormond Beach power plant (MP 0.2).	Not applicable
<i>Rallus longirostris levipes</i> Light-footed clapper rail	FE, CE	Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation.	Suitable habitat for this species exists within Point Mugu Naval Air Station. Nesting occurs at Point Mugu Naval Air Station.	Not applicable; species not identified by the USFWS during consultation.
<i>Riparia riparia</i> Bank swallow	CT	Nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, or ocean to dig nesting hole.	Potential to occur within the Project area. Species has been documented using the Santa Clara River estuary. Potential for nesting and foraging within vertical banks in the Beardsley Wash.	Not applicable
<i>Sterna elegans</i> Elegant tern	FSC, CSC	Formerly a rare and irregular post-nesting visitor to coastal California. Large flocks now can be seen in most years off the Southern California coast. Preferred habitats are inshore coastal waters, bays, estuaries, and harbors; rarely occurs far offshore, and never inland.	Potential for occurrence within the Project vicinity. Observed at NBVC Point Mugu.	Not applicable

Table 4.8-3b Special Status Wildlife Species Potentially Occurring in the Vicinity of the Center Road Pipeline in the Oxnard Plain and Coastal Zone

Scientific Name Common Name	Listing Status	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination
Mammals				
<i>Antrozous pallidus</i> Pallid bat	CSC	Riparian and brushland habitat; roosts in caves, mines, tunnels, and buildings.	Potential to occur in the vicinity of the entire Project area. May forage throughout the area. Roosting habitat or hibernacula is not expected.	Not applicable
<i>Eumops perotis</i> Greater western mastiff-bat	FSC, CSC	Riparian and brushland habitat; roosts in caves, mines, tunnels, and buildings.	Potential to occur in the vicinity of the entire Project area. May forage throughout the area. Roosting habitat or hibernacula is not expected.	Not applicable
<i>Lepus californicus</i> San Diego black-tailed jackrabbit	FSC, CSC	Chaparral and coastal sage scrub.	Potential to occur within the Project area.	Not applicable
<i>Myotis evotis</i> Long-eared myotis	FSC	Riparian and brushland habitat; roosts in caves, mines, tunnels, and buildings.	Potential to occur in the vicinity of the entire Project area. May forage throughout the area. Roosting habitat or hibernacula is not expected.	Not applicable
<i>Myotis leibii</i> Small-footed myotis	FSC	Riparian and brushland habitat; roosts in caves, mines, tunnels, and buildings.	Potential to occur in the vicinity of the entire Project area. May forage throughout the area. Roosting habitat or hibernacula is not expected.	Not applicable
<i>Myotis thysanodes</i> Fringed myotis	FSC	Riparian and brushland habitat; roosts in caves, mines, tunnels, and buildings.	Potential to occur in the vicinity of the entire Project area. May forage throughout the area. Roosting habitat or hibernacula is not expected.	Not applicable
<i>Myotis yumanensis</i> Yuma myotis	FSC, CSC	Riparian and brushland habitat; roosts in caves, mines, tunnels, and buildings.	Potential to occur in the vicinity of the entire Project area. May forage throughout the area. Roosting habitat or hibernacula is not expected.	Not applicable

^a USFWS 2005.^b California Department of Fish and Game 2004; City of Santa Clarita 2004a.**Notes:**

Consultations with USFWS and NOAA Fisheries are ongoing.

FE = Federally listed as endangered; FT = Federally listed as threatened; FD = Federally de-listed; FSC = Federal species of concern; CE = State listed as endangered; CT = State listed as threatened; CSC = California species of concern; CFP = California Fully Protected; ESU = Evolutionarily Significant Unit

Table 4.8-4 Wintering Birds Observed during the Waterfowl Survey along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name Common Name	Arnold Road Alternative	Casper Road Alternative
American avocet <i>Recurvirostra americana</i>		X
American coot <i>Fulica americana</i>	X	X
American kestrel <i>Falco sparverius</i>		X
American wigeon <i>Anas americana</i>	X	X
Barn owl <i>Tyto alba</i>		X
Black phoebe <i>Sayornis nigricans</i>	X	X
Black-necked stilt <i>Himantopus mexicanus</i>	X	
Blue-gray gnatcatcher <i>Polioptila caerulea</i>	X	
Cinnamon teal <i>Anas cyanoptera</i>	X	X
Gadwall <i>Anas strepera</i>	X	
Great blue heron <i>Ardea herodias</i>	X	
Great egret <i>Casmerodius albus</i>	X	
Green heron <i>Butorides virescens</i>		X
Green-winged teal <i>Anas crecca</i>		X
Loggerhead shrike <i>Lanius ludovicianus</i>		X
Mallard <i>Anas platyrhynchos</i>	X	X
Mourning dove <i>Zenaida macroura</i>	X	X
Northern harrier <i>Circus cyaneus</i>		X
Northern pintail <i>Anas acuta</i>		X
Northern shoveler <i>Anas clypeata</i>		X
Pied-billed grebe <i>Podilymbus podiceps</i>		X

Table 4.8-4 Wintering Birds Observed during the Waterfowl Survey along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name Common Name	Arnold Road Alternative	Casper Road Alternative
Red-tailed hawk <i>Buteo jamaicensis</i>		X
Red-winged blackbird <i>Agelaius phoeniceus</i>		X
Ruby-crowned kinglet <i>Regulus calendula</i>	X	
Common yellowthroat <i>Geothlypis trichas</i>	X	
Say's phoebe <i>Sayornis saya</i>	X	X
Snow egret <i>Egretta thula</i>	X	
Turkey vulture <i>Cathartes aura</i>		X
Western meadowlark <i>Sturnella neglecta</i>		X
White-crowned sparrow <i>Zonotrichia leucophrys</i>	X	
White-faced ibis <i>Plegadis chihi</i>	X	X
White-tailed kite <i>Elanus leucurus</i>		X
Yellowlegs <i>Tringa</i> sp.	X	
Yellow-rumped warbler <i>Dendroica coronata</i>	X	X

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Abronia maritima</i>	sand verbena	Nyctaginaceae	N	CNPS List 4	Mugu
<i>Abronia umbellata</i>	pink sand verbena	Nyctaginaceae	N	not rare	
<i>Achillea millefolium</i>	yarrow	Asteraceae	N	not rare	Via Princessa
<i>Acourtia microcephala</i>	sacapellote	Asteraceae	N	not rare	Via Princessa
<i>Adenostomata fasciculatum</i>	chamise	Rosaceae	E	not rare	
<i>Agrostis viridis</i>	green bentgrass	Poaceae	E	not rare	
<i>Allium</i> sp.	Onion	Liliaceae	N/E	not rare	
<i>Allophyllum glutinosum</i>	sticky false gilia	Polemoniaceae	N	not rare	
<i>Amaranthus albus</i>	prostrate pigweed, tumbleweed	Amaranthaceae	E	not rare	
<i>Ambrosia acanthicarpa</i>	sandbur, annual bursage	Asteraceae	N	not rare	Disturbed Areas
<i>Ambrosia artemisiifolia</i>	common ragweed	Asteraceae	E	not rare	
<i>Ambrosia chamissonis</i>	silver beachburr	Asteraceae	N	not rare	
<i>Ambrosia psilostachya</i>	western ragweed	Asteraceae	N	not rare	
<i>Ambrosia</i> sp.	ragweed	Asteraceae	N/E	not rare	
<i>Ammophila arenaria</i>	European beachgrass	Poaceae	E	not rare	
<i>Amsinckia menziesii</i>	Menzies' fiddleneck	Boraginaceae	N	not rare	
<i>Anagallis arvensis</i>	scarlet pimpernel	Primulaceae	E	not rare	Rivers
<i>Anemopsis californica</i>	yerba mansa	Saururaceae	N	not rare	
<i>Anthemis cotula</i>	stinking chamomile, dog fennel	Asteraceae	E	not rare	
<i>Apiastrum angustifolium</i>	mock parsley	Apiaceae	N	not rare	Rolling Ridge
<i>Artemisia californica</i>	California sagebrush	Asteraceae	N	not rare	

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Artemisia douglasiana</i>	mugwort	Asteraceae	N	not rare	
<i>Artemisia tridentata</i>	big sagebrush	Asteraceae	N	not rare	Santa Clarita
<i>Arundo donax</i>	giant reed	Poaceae	E	not rare	Ubiquitous
<i>Asclepias fascicularis</i>	narrow-leaf milkweed, Mexican whorled milkweed	Asclepiadaceae	N	not rare	
<i>Aster chilensis</i>	creeping aster	Asteraceae	N	not rare	Saltmarsh, Disturbed
<i>Aster subulatus</i> var. <i>ligulatus</i>	annual water aster	Asteraceae	N	not rare	Wet, Alkaline
<i>Astragalus trichopodus</i> var. <i>lonchus</i>	Santa Barbara milk vetch	Fabaceae	N	not rare	
<i>Astragalus trichopodus</i> var. <i>phoxus</i>	Santa Barbara milkvetch	Fabaceae	N	not rare	
<i>Atriplex californica</i>	California saltbush	Chenopodiaceae	N	not rare	
<i>Atriplex lentiformis</i>	big saltbush	Chenopodiaceae	N	not rare	
<i>Atriplex lentiformis</i> ssp. <i>lentiformis</i>	big saltbush	Chenopodiaceae	N	not rare	Mugu
<i>Atriplex leucophylla</i>	saltbush	Chenopodiaceae	N	not rare	
<i>Atriplex semibaccata</i>	Australian saltbush	Chenopodiaceae	E	not rare	
<i>Atriplex triangularis</i>	spearscale	Chenopodiaceae	N	not rare	Coastal Dunes
<i>Avena barbata</i>	slender wild oat	Poaceae	E	not rare	
<i>Avena fatua</i>	wild oat	Poaceae	E	not rare	
<i>Baccharis douglasii</i>	saltmarsh baccharis	Asteraceae	N	not rare	Coastal Saltmarsh
<i>Baccharis pilularis</i>	coyote bush	Asteraceae	N	not rare	
<i>Baccharis salicifolia</i>	mulefat	Asteraceae	N	not rare	
<i>Batis maritima</i>	saltwort	Bataceae	N	not rare	
<i>Brassica nigra</i>	black mustard	Brassicaceae	E	not rare	

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Brassica tournefortii</i>	Asian mustard	Brassicaceae	E	not rare	
<i>Brickellia californica</i>	brickellia	Asteraceae	N	not rare	
<i>Bromus catharticus</i>	rescuegrass	Poaceae	E	not rare	
<i>Bromus diandrus</i>	ripgut brome	Poaceae	E	not rare	
<i>Bromus hordeaceus</i>	soft chess	Poaceae	E	not rare	
<i>Bromus madritensis</i> ssp. <i>rubens</i>	foxtail brome	Poaceae	E	not rare	
<i>Bromus</i> spp.	brome grasses	Poaceae	E	not rare	
<i>Bromus tectorum</i>	cheatgrass	Poaceae	E	not rare	
<i>Cakile maritima</i>	sea rocket	Brassicaceae	E	not rare	Dunes
<i>Calandrinia ciliata</i>	red maids	Portulacaceae	N	not rare	Quigley
<i>Calochortus clavatus</i> var. <i>gracilis</i>	clubhair mariposa lily	Liliaceae	N	not rare	Honor Rancho
<i>Calochortus venustus</i>	butterfly mariposa lily	Liliaceae	N	not rare	Quigley
<i>Calystegia macrostegia</i> ssp. <i>intermedia</i>	bindweed	Convolvulaceae	N	not rare	Quigley
<i>Camissonia bistorta</i>	California sun cup	Onagraceae	N	not rare	Rivers
<i>Camissonia californica</i>	California sun cups	Onagraceae	N	not rare	
<i>Camissonia campestris</i>	field primrose	Onagraceae	N	not rare	Rivers
<i>Camissonia cheiranthifolia</i> ssp. <i>suffruticosa</i>	beach evening primrose	Onagraceae	N	not rare	Dunes
<i>Camissonia confusa</i>	San Bernardino suncup	Onagraceae	N	not rare	
<i>Camissonia graciliflora</i>	hill sun cup	Onagraceae	E	not rare	South Fork Santa Clara River
<i>Camissonia hirtella</i>	hairy sun cups	Onagraceae	N	not rare	Rivers
<i>Camissonia intermedia</i>	intermediate suncup	Onagraceae	N	not rare	

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Camissonia strigulosa</i>	strigose suncup	Onagraceae	N	not rare	
<i>Capsella bursa-pastoris</i>	shepherd's purse	Brassicaceae	E	not rare	
<i>Carduus pycnocephalus</i>	Italian plumeless thistle	Asteraceae	E	not rare	
<i>Carex</i> sp.	sedge	Cyperaceae	N	not rare	
<i>Carpobrotus chilensis</i>	sea fig	Aizoaceae	E	not rare	
<i>Carpobrotus edulis</i>	ice plant	Aizoaceae	E	not rare	
<i>Castilleja exserta</i> ssp. <i>exserta</i>	purple owl's clover	Scrophulariaceae	N	not rare	Honor Rancho
<i>Ceanothus crassifolius</i>	hoaryleaf ceanothus	Rhamnaceae	N	not rare	Via Princessa
<i>Centaurea melitensis</i>	totalote	Asteraceae	E	not rare	
<i>Centaurea solstitialis</i>	yellow star thistle	Asteraceae	E	not rare	
<i>Cercocarpus betuloides</i>	mountain mahogany	Rosaceae	N	not rare	Oro Fino
<i>Chaenactis glabriuscula</i> var. <i>glabriuscula</i>	yellow pincushion	Asteraceae	N	not rare	Honor Rancho
<i>Chaenactis glabriuscula</i> var. <i>lanosa</i>	yellow chaenactis	Asteraceae	N	not rare	Dunes
<i>Chamaemelum fuscum</i>	dusky dogfennel	Asteraceae	E	not rare	
<i>Chamaesyce albomarginata</i>	whitemargin sandmat, rattlesnake weed	Euphorbiaceae	N	not rare	
<i>Chamaesyce serpens</i>	creeping spurge	Euphorbiaceae	N	not rare	Disturbed Areas
<i>Chamomilla suaveolens</i>	pineapple weed	Asteraceae	E	not rare	Disturbed Areas
<i>Chenopodium album</i>	lambsquarters	Chenopodiaceae	E	not rare	Pigweed

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Chenopodium ambrosioides</i>	Mexican tea	Chenopodiaceae	E	not rare	Disturbed Areas, Agricultural Land
<i>Chenopodium berlandieri</i>	pitseed goosefoot	Chenopodiaceae	N	not rare	Rivers
<i>Chenopodium botrys</i>	Jerusalem oak goosefoot	Chenopodiaceae	E	not rare	Rivers
<i>Chenopodium californicum</i>	California goosefoot	Chenopodiaceae	N	not rare	Scrub
<i>Chenopodium chenopodioides</i>	goosefoot	Chenopodiaceae	E	not rare	
<i>Chenopodium desiccatum</i>	aridland goosefoot	Chenopodiaceae	N	not rare	Uncommon (Jepson) - Range Extension According To Jepson, Specimen In L.A. County According To Calflora
<i>Chenopodium fremontii</i>	Fremont's goosefoot	Chenopodiaceae	N	not rare	C. Vulvaria
<i>Chenopodium incanum</i> var. <i>occidentale</i>	pigweed	Chenopodiaceae	N	not rare	C. Vulvaria
<i>Chenopodium</i> sp.	goosefoot	Chenopodiaceae	N/E	not rare	
<i>Chenopodium vulvaria</i>	stinking goosefoot	Chenopodiaceae	E	not rare	Uncommon (Jepson) - Range Extension According To Jepson, Specimen In L.A. County According To Calflora
<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	wavyleaf soaproot	Liliaceae	N	not rare	
<i>Cirsium occidentale</i> var. <i>occidentale</i>	thistle	Asteraceae	N	not rare	
<i>Cirsium</i> sp.	thistle	Asteraceae	N/E	not rare	
<i>Cirsium vulgare</i>	bullthistle	Asteraceae	E	not rare	
<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	winecup fairyfan	Onagraceae	N	not rare	

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Claytonia perfoliata</i> ssp. <i>perfoliata</i>	miner's lettuce	Portulacaceae	N	not rare	
<i>Cnicus benedictus</i>	blessed thistle	Asteraceae	E	not rare	Weed, Santa Clarita
<i>Conium maculatum</i>	poison hemlock	Apiaceae	E	not rare	Disturbed Areas
<i>Convolvulus arvensis</i>	field bindweed	Convolvulaceae	E	not rare	
<i>Conyza bonariensis</i>	South American horseweed	Asteraceae	E	not rare	Disturbed Areas
<i>Conyza canadensis</i>	Canadian horseweed	Asteraceae	N	not rare	Disturbed Areas/Ubiquitous
<i>Cordylanthus maritimus</i> ssp. <i>maritimus</i>	saltmarsh bird's beak	Scrophulariaceae	N	FE, SE, CNPS 1B	
<i>Coreopsis gigantea</i>	giant coreopsis	Asteraceae	N	not rare	Mugu
<i>Coronopus didymus</i>	lesser swinecress	Brassicaceae	E	not rare	
<i>Cortaderia jubata</i>	Andes grass	Poaceae	E	not rare	
<i>Cotula coronopifolia</i>	brass buttons	Asteraceae	E	not rare	Coastal Marsh
<i>Cressa truxillensis</i>	spreading alkaliweed	Convolvulaceae	N	not rare	Mugu
<i>Croton californicus</i>	California croton	Euphorbiaceae	N	not rare	South Fork Santa Clara River
<i>Crypsis schoenoides</i>	swamp grass	Poaceae	E	not rare	
<i>Cryptantha echinella</i>	prickly catseye	Boraginaceae	N	not rare	
<i>Cryptantha micrantha</i>	redroot catseye	Boraginaceae	N	not rare	
<i>Cryptantha microstachys</i>	Tejon catseye	Boraginaceae	N	not rare	
<i>Cryptantha muricata</i>	pointed catseye	Boraginaceae	N	not rare	
<i>Cucurbita foetidissima</i>	Missouri gourd, stinking gourd	Cucurbitaceae	N	not rare	
<i>Cuscuta californica</i>	chaparral dodder	Cuscutaceae	N	not rare	

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Cuscuta salina</i> var. <i>major</i>	goldenthread	Cuscutaceae	N	not rare	Coastal Marsh
<i>Cuscuta subinclusa</i>	canyon dodder	Cuscutaceae	N	not rare	
<i>Cynodon dactylon</i>	Bermuda grass	Poaceae	E	not rare	
<i>Cyperus eragrostis</i>	tall flatsedge	Cyperaceae	N	not rare	
<i>Datura wrightii</i>	jimson weed	Solanaceae	N	not rare	
<i>Daucus pusillus</i>	American wild carrot	Apiaceae	N	not rare	
<i>Delphinium parryi</i> ssp. <i>parryi</i>	San Bernardino larkspur	Ranunculaceae	N	not rare	Via Princessa
<i>Dichelostemma capitatum</i>	blue dicks	Liliaceae	N	not rare	
<i>Distichlis spicata</i>	saltgrass	Poaceae	N	not rare	
<i>Echinochloa crus-pavonis</i>	gulf cockspur grass	Poaceae	E	not rare	
<i>Echinochloa crus-pavonis</i>	gulf cockspur grass	Poaceae	E	not rare	
<i>Emmenanthe penduliflora</i> var. <i>penduliflora</i>	whispering bells	Hydrophyllaceae	N	not rare	
<i>Encelia californica</i>	California brittlebush	Asteraceae	N	not rare	Rolling Ridge
<i>Epilobium brachycarpum</i>	autumn willowweed	Onagraceae	N	not rare	
<i>Epilobium ciliatum</i>	hairy willowherb	Onagraceae	N	not rare	
<i>Eragrostis mexicana</i>	Mexican lovegrass	Poaceae	N	not rare	
<i>Ericameria ericoides</i>	mock heather, goldenbush	Asteraceae	N	not rare	Harbor Blvd.
<i>Erigeron foliosus</i> var. <i>foliosus</i>	leafy fleabane	Asteraceae	N	not rare	

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Eriodictyon californicum</i>	California yerbasanta	Hydrophyllaceae	N	not rare	
<i>Eriodictyon trichocalyx</i> var. <i>trichocalyx</i>	hairy yerba santa	Hydrophyllaceae	N	not rare	
<i>Eriogonum deflexum</i>	flat-topped buckwheat	Polygonaceae	N	not rare	
<i>Eriogonum fasciculatum</i>	California buckwheat	Polygonaceae	N	not rare	
<i>Eriogonum gracile</i> var. <i>gracile</i>	slender buckwheat	Polygonaceae	N	not rare	
<i>Eriogonum parvifolium</i>	seacliff buckwheat	Polygonaceae	N	not rare	
<i>Eriogonum</i> sp.	buckwheat	Polygonaceae	N/E	not rare	
<i>Eriophyllum confertiflorum</i>	yellow yarrow	Asteraceae	N	not rare	Rolling Ridge
<i>Erodium botrys</i>	longbeak stork's bill	Geraniaceae	E	not rare	Quigley, Ubiquitous
<i>Erodium cicutarium</i>	redstem stork's bill, fillarie	Geraniaceae	E	not rare	Ubiquitous
<i>Eschscholzia californica</i>	California poppy	Papaveraceae	N	not rare	
<i>Eucalyptus globulus</i>	blue gum	Myrtaceae	E	not rare	
<i>Eucalyptus</i> sp.	eucalyptus, blue gum	Myrtaceae	E	not rare	
<i>Eucrypta chrysanthemifolia</i> var. <i>chrysanthemifolia</i>	spotted hideseed	Hydrophyllaceae	N	not rare	Via Princessa, Quigley
<i>Euthamia occidentalis</i>	western goldenrod	Asteraceae	N	not rare	
<i>Festuca rubra</i>	red fescue	Poaceae	E	not rare	
<i>Filago californica</i>	California cottonrose	Asteraceae	N	not rare	
<i>Foeniculum vulgare</i>	sweet fennel	Apiaceae	E	not rare	
<i>Frankenia salina</i>	alkali heath	Frankeniaceae	N	not rare	Edison Canal

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Galium aparine</i>	common bedstraw	Rubiaceae	N	not rare	Via Princessa, Quigley
<i>Gazania linearis</i>	gazania	Asteraceae	E	not rare	
<i>Gilia achilleifolia</i> ssp. <i>multicaulis</i>	California gilia	Polemoniaceae	N	not rare	Quigley
<i>Gilia angelensis</i>	chaparral gilia	Polemoniaceae	N	not rare	Quigley
<i>Gnaphalium bicolor</i>	twocolor cudweed	Asteraceae	N	not rare	Honor Rancho
<i>Gnaphalium californicum</i>	ladies' tobacco, everlasting	Asteraceae	N	not rare	
<i>Gnaphalium canescens</i> ssp. <i>microcephalum</i>	everlasting	Asteraceae	N	not rare	
<i>Gnaphalium luteo-album</i>	everlasting cudweed	Asteraceae	E	not rare	
<i>Gnaphalium palustre</i>	western marsh cudweed	Asteraceae	N	not rare	
<i>Gnaphalium stramineum</i>	cottonbatting plant	Asteraceae	N	not rare	
<i>Hazardia squarrosa</i>	saw-toothed goldenbush	Asteraceae	N	not rare	
<i>Helianthus annuus</i>	common sunflower	Asteraceae	N	not rare	
<i>Heliotropium curassavicum</i>	seaside heliotrope	Boraginaceae	N	not rare	
<i>Hemizonia fasciculata</i>	clustered tarweed	Asteraceae	N	not rare	Disturbed Areas
<i>Heteromeles arbutifolia</i>	toyon	Rosaceae	N	not rare	
<i>Heterotheca grandiflora</i>	telegraphweed	Asteraceae	N	not rare	Rolling Ridge
<i>Hirschfeldia incana</i>	summer mustard	Brassicaceae	E	not rare	
<i>Hordeum murinum</i>	barley	Poaceae	E	not rare	

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Hordeum murinum</i> ssp. <i>glaucum</i>	smooth barley	Poaceae	E	not rare	
<i>Hypochaeris glabra</i>	smooth cat's ear	Asteraceae	E	not rare	Quigley
<i>Jaumea carnosa</i>	jaumea	Asteraceae	N	not rare	
<i>Juglans californica</i>	California black walnut	Juglandaceae	N	not rare	
<i>Juncus balticus</i>	Baltic rush	Juncaceae	N	not rare	
<i>Juncus bufonius</i>	toad rush	Juncaceae	N	not rare	
<i>Juncus bufonius</i> var. <i>congestus</i>	toad rush	Juncaceae	N	not rare	Coastal, Saline Habitat
<i>Juncus bufonius</i> var. <i>occidentalis</i>	toad rush	Juncaceae	N	not rare	
<i>Juncus falcatus</i> var. <i>falcatus</i>	falcate rush	Juncaceae	N	not rare	
<i>Lactuca serriola</i>	wild lettuce	Asteraceae	E	not rare	Ubiquitous
<i>Lagophylla ramosissima</i> ssp. <i>ramosissima</i>	common hareleaf	Asteraceae	N	not rare	Silvery, Yellow Flower, Closed At Mid-Day
<i>Lamarckia aurea</i>	goldentop	Poaceae	E	not rare	
<i>Lasthenia californica</i>	goldfields, common goldfields	Asteraceae	N	not rare	Quigley
<i>Lepidium latifolium</i>	broadleaved pepperweed	Brassicaceae	E	not rare	
<i>Lepidium pinnatifidum</i>	featherleaf pepperweed	Brassicaceae	E	not rare	
<i>Lepidospartum squamatum</i>	scalebroom	Asteraceae	N	not rare	
<i>Leptochloa uninervia</i>	Mexican sprangle top	Poaceae	E	not rare	Oxnard Plain - Agricultural Land
<i>Lessingia filaginifolia</i> var. <i>filaginifolia</i>	common sand aster, robust sand aster	Asteraceae	N	not rare	Rolling Ridge

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Leymus condensatus</i>	giant ryegrass	Poaceae	N	not rare	
<i>Leymus triticoides</i>	rye grass, creeping wild rye	Poaceae	N	not rare	
<i>Limonium californicum</i>	western marsh-rosemary	Plumbaginaceae	N	not rare	
<i>Lolium multiflorum</i>	Italian ryegrass	Poaceae	E	not rare	
<i>Lolium temulentum</i>	Darnel ryegrass	Poaceae	E	not rare	
<i>Lomatium macrocarpum</i>	bigseed biscuitroot	Apiaceae	N	not rare	
<i>Lonicera involucrata</i>	twinberry honeysuckle	Caprifoliaceae	N	not rare	
<i>Lotus corniculatus</i>	birdfoot trefoil	Fabaceae	E	not rare	Coastal Weed
<i>Lotus hamatus</i>	San Diego birdsfoot trefoil	Fabaceae	N	not rare	
<i>Lotus nevadensis</i> var. <i>nevadensis</i>	Nevada trefoil	Fabaceae	N	not rare	
<i>Lotus purshianus</i> var. <i>purshianus</i>	Spanish clover	Fabaceae	N	not rare	
<i>Lotus salsuginosus</i> var. <i>salsuginosus</i>	coastal trefoil	Fabaceae	N	not rare	
<i>Lotus scoparius</i>	deerweed, California broom	Fabaceae	N	not rare	
<i>Lupinus bicolor</i>	bicolor lupine	Fabaceae	N	not rare	Quigley
<i>Lupinus breweri</i> var. <i>bryoides</i>	Brewer's lupine	Fabaceae	N	not rare	Quigley
<i>Lupinus chamissonis</i>	dune lupine	Fabaceae	N	not rare	
<i>Lupinus concinnus</i>	bajada lupine	Fabaceae	N	not rare	Rolling Ridge
<i>Lupinus hirsutissimus</i>	stinging lupine	Fabaceae	N	not rare	Rolling Ridge

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Lupinus microcarpus</i> var. <i>densiflorus</i>	chick lupine	Fabaceae	N	not rare	
<i>Lupinus succulentus</i>	arroyo lupine	Fabaceae	N	not rare	Rivers
<i>Lupinus truncatus</i>	collared annual lupine	Fabaceae	N	not rare	Rolling Ridge
<i>Lythrum californicum</i>	California loosestrife	Lythraceae	N	not rare	
<i>Malacothamnus fasciculatus</i>	chaparral mallow	Malvaceae	N	not rare	Check
<i>Malacothamnus fremontii</i>	Fremont's bushmallow	Malvaceae	N	not rare	Common Chaparral Mallow
<i>Malacothrix saxatilis</i>	cliff-aster	Asteraceae	N	not rare	
<i>Malva parviflora</i>	cheeseweed	Malvaceae	E	not rare	Disturbed Areas
<i>Malvella leprosa</i>	alkali mallow, whiteweed	Malvaceae	N	not rare	
<i>Marah fabaceus</i>	California man-root	Cucurbitaceae	N	not rare	Via Princessa, Quigley
<i>Marah macrocarpus</i> var. <i>macrocarpus</i>	Cucamonga manroot	Cucurbitaceae	N	not rare	Via Princessa, Quigley
<i>Marrubium vulgare</i>	horehound	Lamiaceae	E	not rare	
<i>Medicago polymorpha</i>	burclover	Fabaceae	E	not rare	
<i>Medicago sativa</i>	alfalfa	Fabaceae	E	not rare	Coastal Agricultural Weed
<i>Melilotus alba</i>	white sweetclover	Fabaceae	E	not rare	
<i>Melilotus indica</i>	sourclover	Fabaceae	E	not rare	Oxnard Plain - Agricultural Land, Rivers
<i>Mentzelia laevicaulis</i>	smoothstem blazingstar	Loasaceae	N	not rare	
<i>Mesembryanthemum crystallinum</i>	crystalline iceplant	Aizoaceae	E	not rare	Coastal
<i>Micropus californicus</i>	slender cottonweed	Asteraceae	N	not rare	
<i>Mimulus aurantiacus</i>	monkey flower	Scrophulariaceae	N	not rare	

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Mimulus cardinalis</i>	crimson monkeyflower, scarlet monkey flower	Scrophulariaceae	N	not rare	
<i>Mimulus floribundus</i>	manyflowered monkeyflower	Scrophulariaceae	N	not rare	
<i>Mimulus guttatus</i>	seep monkeyflower	Scrophulariaceae	N	not rare	
<i>Mimulus parishii</i>	seep monkeyflower	Scrophulariaceae	N	not rare	Rivers
<i>Mimulus pilosus</i>	false monkeyflower	Scrophulariaceae	N	not rare	
<i>Mirabilis californica</i>	wishbone bush	Nyctaginaceae	N	not rare	Honor Rancho
<i>Myoporum laetum</i>	myoporum	Myoporaceae	E	not rare	
<i>Nassella lepida</i>	foothill needlegrass	Poaceae	N	not rare	
<i>Nassella pulchra</i>	purple needlegrass	Poaceae	N	not rare	
<i>Nerium oleander</i>	oleander	Apocynaceae	E	not rare	
<i>Nicotiana glauca</i>	tree tobacco	Solanaceae	E	not rare	
<i>Nicotiana quadrivalvis</i>	Indian tobacco	Solanaceae	N	not rare	
<i>Oenothera elata</i>	evening primrose	Onagraceae	N	not rare	
<i>Oenothera elata</i> ssp. <i>hirsutissima</i>	Hooker's evening primrose	Onagraceae	N	not rare	
<i>Opuntia littoralis</i>	prickly pear	Cactaceae	N	not rare	
<i>Paspalum dilatatum</i>	dallisgrass	Poaceae	E	not rare	
<i>Pectocarya linearis</i> ssp. <i>ferocula</i>	sagebrush combseed	Boraginaceae	N	not rare	Rivers
<i>Phacelia distans</i>	distant phacelia	Hydrophyllaceae	N	not rare	
<i>Phacelia douglasii</i>	Douglas' scorpionweed	Hydrophyllaceae	N	not rare	
<i>Phacelia parryi</i>	Parry's phacelia	Hydrophyllaceae	N	not rare	
<i>Phacelia ramosissima</i>	branching phacelia	Hydrophyllaceae	N	not rare	

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Phacelia ramosissima</i> var. <i>latifolia</i>	branching phacelia	Hydrophyllaceae	N	not rare	
<i>Phalaris</i> sp.	canarygrass	Poaceae	E	not rare	
<i>Picris echioides</i>	bristly ox-tongue	Asteraceae	E	not rare	Oxnard
<i>Plagiobothrys arizonicus</i>	Arizona popcornflower	Boraginaceae	N	not rare	
<i>Plagiobothrys canescens</i>	grey popcornflower	Boraginaceae	N	not rare	
<i>Plagiobothrys nothofulvus</i>	rusty popcornflower	Boraginaceae	N	not rare	
<i>Plantago erecta</i>	rock plantago	Plantaginaceae	N	not rare	Quigley
<i>Platanus racemosa</i>	California sycamore, Western sycamore	Platanaceae	N	not rare	
<i>Pluchea odorata</i>	salt marsh fleabane	Asteraceae	N	not rare	
<i>Poa annua</i>	annual bluegrass	Poaceae	E	not rare	
<i>Polygonum amphibium</i>	water smartweed	Polygonaceae	N	not rare	
<i>Polygonum arenastrum</i>	knotweed	Polygonaceae	E	not rare	
<i>Polygonum argyrocoleon</i>	silversheath knotweed, shining chickweed	Polygonaceae	E	not rare	
<i>Polygonum lapathifolium</i>	willow weed	Polygonaceae	N	not rare	Large Leaf, Pink Flower
<i>Polygonum punctatum</i>	punctate smartweed	Polygonaceae	N	not rare	Small White Flower
<i>Polypogon monspeliensis</i>	annual beard grass, rabbitsfoot grass	Poaceae	E	not rare	Rivers
<i>Populus fremontii</i> ssp. <i>fremontii</i>	Fremont cottonwood	Salicaceae	N	not rare	
<i>Portulaca oleracea</i>	common purslane	Portulacaceae	E	not rare	

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Prunus ilicifolia</i> ssp. <i>ilicifolia</i>	hollyleaf cherry	Rosaceae	N	not rare	Oro Fino Canyon
<i>Pterostegia drymarioides</i>	woodland pterostegia	Polygonaceae	N	not rare	Via Princessa
<i>Quercus agrifolia</i>	coast live oak	Fagaceae	N	not rare	
<i>Quercus john-tuckeri</i>	Tucker's oak	Fagaceae	N	not rare	
<i>Quercus lobata</i>	valley oak	Fagaceae	N	not rare	
<i>Raphanus sativus</i>	wild radish	Brassicaceae	E	not rare	Ubiquitous
<i>Rhamnus crocea</i>	spiny redberry	Rhamnaceae	N	not rare	
<i>Rhus integrifolia</i>	lemonade berry	Anacardiaceae	N	not rare	
<i>Rhus ovata</i>	sugarbush	Anacardiaceae	N	not rare	
<i>Rhus trilobata</i>	squawbush	Anacardiaceae	N	not rare	Chaparral
<i>Ribes aureum</i> var. <i>gracillimum</i>	golden currant	Grossulariaceae	N	not rare	Santa Clara River Alternative
<i>Ribes sanguineum</i>	red-flowering currant	Grossulariaceae	N	not rare	Via Princessa
<i>Ricinus communis</i>	castor bean	Euphorbiaceae	E	not rare	
<i>Rorippa nasturtium-aquaticum</i>	watercress	Brassicaceae	E	not rare	
<i>Rumex crispus</i>	curly dock	Polygonaceae	N	not rare	
<i>Rumex maritimus</i>	golden dock	Polygonaceae	N	not rare	
<i>Rumex pulcher</i>	fiddle dock	Polygonaceae	E	not rare	
<i>Rumex salicifolius</i> var. <i>crassus</i>	willow dock	Polygonaceae	N	not rare	Coastal Salt Marsh
<i>Salicornia</i> sp.	pickleweed	Chenopodiaceae	N	not rare	
<i>Salicornia subterminalis</i>	Parish's glasswort	Chenopodiaceae	N	not rare	
<i>Salicornia virginica</i>	pickleweed	Chenopodiaceae	N	not rare	Coastal Salt Marsh

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Salix exigua</i>	narrow-leaved willow	Salicaceae	N	not rare	
<i>Salix exigua</i>	sandbar willow, narrow-leaved willow	Salicaceae	N	not rare	
<i>Salix gooddingii</i>	Goodding's black willow	Salicaceae	N	not rare	
<i>Salix laevigata</i>	red willow	Salicaceae	N	not rare	
<i>Salix lasiolepis</i>	arroyo willow	Salicaceae	N	not rare	
<i>Salsola tragus</i>	tumbleweed	Chenopodiaceae	E	not rare	
<i>Salvia apiana</i>	white sage	Lamiaceae	N	not rare	
<i>Salvia columbariae</i>	chia	Lamiaceae	N	not rare	
<i>Salvia leucophylla</i>	purple sage	Lamiaceae	N	not rare	
<i>Salvia mellifera</i>	black sage	Lamiaceae	N	not rare	
<i>Sambucus mexicana</i>	blue elderberry	Caprifoliaceae	N	not rare	
<i>Sanicula crassicaulis</i>	pacific blacksnakeroot	Apiaceae	N	not rare	
<i>Schinus molle</i>	Peruvian pepper tree, California pepper tree	Anacardiaceae	E	not rare	
<i>Schismus barbatus</i>	common Mediterranean grass	Poaceae	E	not rare	
<i>Scirpus americanus</i>	bulrush	Cyperaceae	N	not rare	
<i>Scirpus californicus</i>	California tule	Cyperaceae	N	not rare	
<i>Scirpus maritimus</i>	prairie rush	Cyperaceae	N	not rare	
<i>Scirpus</i> sp.	bulrush	Cyperaceae	N	not rare	
<i>Senecio flaccidus</i> var. <i>douglasii</i>	Douglas' ragwort	Asteraceae	N	not rare	
<i>Senecio vulgaris</i>	common groundsel	Asteraceae	E	not rare	Quigley
<i>Silene gallica</i>	common catchfly, windmill pink	Caryophyllaceae	E	not rare	Quigley

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Silybum marianum</i>	milkthistle	Asteraceae	E	not rare	
<i>Sisymbrium irio</i>	London rocket	Brassicaceae	E	not rare	
<i>Sisymbrium orientale</i>	Indian hedge mustard	Brassicaceae	E	not rare	Weed
<i>Solanum americanum</i>	common nightshade	Solanaceae	N	not rare	
<i>Solanum nigrum</i>	black nightshade	Solanaceae	E	not rare	Oxnard Plain - Agricultural Land
<i>Solanum xanti</i>	purple nightshade	Solanaceae	N	not rare	Quigley
<i>Sonchus asper</i> ssp. <i>asper</i>	prickly sowthistle	Asteraceae	E	not rare	Oxnard Plain - Agricultural Land
<i>Sonchus oleraceus</i>	common sowthistle	Asteraceae	E	not rare	
<i>Spergularia macrotheca</i> var. <i>macrotheca</i>	sticky sand-spurry	Caryophyllaceae	N	not rare	
<i>Spergularia rubra</i>	red sand-spurry	Caryophyllaceae	N	not rare	
<i>Stellaria media</i>	common chickweed	Caryophyllaceae	N	not rare	
<i>Stellaria nitens</i>	shining chickweed	Caryophyllaceae	N	not rare	
<i>Stellaria</i> sp.	chickweed	Caryophyllaceae	N/E	not rare	
<i>Stephanomeria virgata</i> ssp. <i>virgata</i>	tall milk-aster	Asteraceae	N	not rare	
<i>Suaeda taxifolia</i>	woolly sea-blite	Chenopodiaceae	N	not rare	Edison Canal
<i>Tamarix chinensis</i>	Chinese tamarisk	Tamaricaceae	E	not rare	
<i>Tamarix</i> sp.	tamarisk	Tamaricaceae	E	not rare	
<i>Taraxacum officinale</i>	dandelion	Asteraceae	E	not rare	
<i>Thysanocarpus laciniatus</i>	lacepod	Brassicaceae	N	not rare	
<i>Tribulus terrestris</i>	puncturevine	Zygophyllaceae	E	not rare	
<i>Trichostema lanceolatum</i>	vinegarweed	Lamiaceae	N	not rare	

Table 4.8-5 Sensitive Plant Spring and Summer 2005 Survey Results along the Center Road Pipeline and the Line 225 Pipeline Loop and Their Alternatives

Scientific Name	Common Name	Family	Native/ Exotic	Rarity	Comments
<i>Trifolium albopurpureum</i> var. <i>albopurpureum</i>	common Indian clover	Fabaceae	N	not rare	
<i>Trifolium ciliolatum</i>	foothill clover	Fabaceae	N	not rare	Quigley
<i>Trifolium hirtum</i>	rose clover	Fabaceae	E	not rare	
<i>Trifolium repens</i>	white clover	Fabaceae	E	not rare	
<i>Triticum aestivum</i>	wheat	Poaceae	E	not rare	Agricultural Weed
<i>Typha</i> sp.	cattails	Typhaceae	N	not rare	
<i>Uropappus lindleyi</i>	silver puffs	Asteraceae	N	not rare	
<i>Urtica dioica</i>	stinging nettle	Urticaceae	N	not rare	Hueneme Alternative
<i>Urtica dioica</i> ssp. <i>holosericea</i>	hoary nettle	Urticaceae	N	not rare	Mugu
<i>Urtica urens</i>	dwarf nettle	Urticaceae	E	not rare	Hueneme Alternative
<i>Veronica anagallis-aquatica</i>	water speedwell	Scrophulariaceae	E	not rare	Rivers
<i>Vicia sativa</i>	common vetch	Fabaceae	E	not rare	
<i>Vicia villosa</i>	hairy vetch	Fabaceae	E	not rare	
<i>Vulpia microstachys</i>	small fescue	Poaceae	N	not rare	
<i>Vulpia myuros</i> var. <i>hirsuta</i>	rattail fescue	Poaceae	E	not rare	
<i>Xanthium strumarium</i>	cocklebur	Asteraceae	N	not rare	Rivers, Wetlands
<i>Xanthium strumarium</i>	cocklebur	Asteraceae	N	not rare	
<i>Yucca</i> sp.	yucca	Agavaceae	N	not rare	
<i>Yucca whipplei</i>	our Lord's candle	Agavaceae	N	not rare	
<i>Zigadenus fremontii</i>	Fremont's death camas	Liliaceae	N	not rare	Via Princessa, Quigley

Table 4.8-6 Tree Species and Locations within the Proposed Center Road Pipeline and Its Alternatives

Route	MP	Tree ID No.	Species	Maximum Linear Feet (Meters) that Could Fall Within the ROW	Relationship to Alignment	Average DBH	Average Height	Nesting Activity?	Notes
Proposed Route	0.25	1	Myoporum/ Eucalyptus	80 (24.4)	Perpendicular	10	20	No	-
Proposed Route	4	2	Eucalyptus	1,500 (457.2)	West	35	50	No	~55 individuals more than 20 inches DBH
Proposed Route	4.1	3	Poplar	80 (24.4)	Perpendicular on west edge	5	25	No	-
Proposed Route	4.15	4	Eucalyptus	80 (24.4)	Perpendicular on east edge	20	40	No	-
Proposed Route	4.8	5	Eucalyptus	500 (152.4)	West	20	50	No	-
Proposed Route	4.8	6	Cedar	100 (30.5)	South	6	12	No	Young
Proposed Route	5.2	7	Eucalyptus	1,000 (304.8)	East	15	15	No	Topped
Proposed Route	5.3	8	Eucalyptus	80 (24.4)	Perpendicular on east edge	10	40	No	Young
Proposed Route	5.8	9	Ironwood	2,000 (609.6)	West	5	10	No	Topped
Total number of linear feet of trees that could be removed from the Center Road Pipeline Route: 6,170 linear feet									
ALT 1 and ALT 2	2.9	10	Eucalyptus	1,000 (304.8)	Southeast	50	60	No	Currently being pruned/thinned.
ALT 1 and ALT 2	3	11	Eucalyptus	350 (106.7)	Southeast	25	45	No	-
ALT 1 and ALT 2	3	12	Eucalyptus	12 (3.7)	Northwest	25	45	No	-
ALT 2	4	13	Eucalyptus	1,000 (304.8)	Southeast	15	45	No	-
ALT 2	5.2	14	Eucalyptus	600 (182.9)	Southeast	10	30	No	-
Proposed Route	7.5	15	Eucalyptus/ Ironwood	750 (228.6)	West	15	40	No	-
ALT 1	12.9	16	Eucalyptus	80 (24.4)	South-southwest	10	25	No	-

Table 4.8-6 Tree Species and Locations within the Proposed Center Road Pipeline and Its Alternatives

Route	MP	Tree ID No.	Species	Maximum Linear Feet (Meters) that Could Fall Within the ROW	Relationship to Alignment	Average DBH	Average Height	Nesting Activity?	Notes
ALT 1	12.9	17	Eucalyptus	150 (45.7)	South-southwest	10	25	No	-
ALT 1	12.9	18	Eucalyptus	80 (24.4)	North-northwest	15	30	No	-
ALT 1	12.9	19	Eucalyptus	150 (45.7)	South-southwest	7	12	No	-
ALT 1	11.9	20	Eucalyptus/ California Pepper	200 (61.0)	North-northwest	10	25	No	-
ALT 1	11.8	21	Eucalyptus/ Myoporum	1,200 (365.8)	West	5	12	No	-
ALT 1	11.6	22	Eucalyptus	200 (61.0)	West	15	35	No	-
ALT 1	11.4	23	Eucalyptus	700 (213.4)	West	15	35	No	-
ALT 1	10.2	24	Eucalyptus	80 (24.4)	Southeast	15	40	No	May be outside of ROW
ALT 1	10	25	Eucalyptus	80 (24.4)	Southeast	15	40	No	May be outside of ROW
ALT 1	9.8	26	Eucalyptus	80 (24.4)	Southeast	15	40	No	May be outside of ROW
ALT 1	6.5	27	Eucalyptus	80 (24.4)	East	10	20	No	-
ALT 1	6.1	28	Eucalyptus	80 (24.4)	East	12	30	No	-
ALT 1	4.5	29	Eucalyptus	2,500 (762.0)	West	15	40	No	-
Total number of linear feet of trees that could be removed: Alternative 1 = 5,660 linear feet; Alternative 1 and Alternative 2 = 1,362 linear feet; Alternative 2 = 1,600 linear feet;									
ALT 3	0-0.15	---	Citrus	792	North	7	13	No	
ALT 3	1.85-2.08	---	Citrus	1214.4	South	7	15 to 20	No	
ALT 3	2.03-2.08	---	Citrus	264	North	10	15 to 20	No	
ALT 3	0.76-0.80	---	Avocado	211.2	North	7	<30	No	
ALT 3	0.80-0.86	---	Avocado	316.8	Width of ROW	7	<30	No	

Table 4.8-6 Tree Species and Locations within the Proposed Center Road Pipeline and Its Alternatives

Route	MP	Tree ID No.	Species	Maximum Linear Feet (Meters) that Could Fall Within the ROW	Relationship to Alignment	Average DBH	Average Height	Nesting Activity?	Notes
ALT 3	0.96-1.29	---	Avocado	1742.4	West	---	30	No	
ALT 3	1.10-1.28	---	Avocado	950.4	East	4	<15	No	
ALT 3	1.28-1.32	---	Avocado	211.2	Both sides of ROW	4	<15	No	
ALT 3	1.32-1.39	---	Avocado	369.6	Both sides of ROW	3	7	No	
ALT 3	1.39-1.56	---	Avocado	897.6	East	3	7	No	
ALT 3	1.39-1.66	---	Avocado	1425.6	South	3	7	No	
ALT 3	1.61-1.68	---	Avocado	369.6	North	8	10 to 20	No	
ALT 3	1.69-1.85	---	Avocado	844.8	South	6	10 to 20	No	
ALT 3	1.73-1.90	---	Avocado	897.6	North	3	7	No	
ALT 3	1.85-2.0	---	Avocado	792	South	4	15	No	
ALT 3	0.36-0.37	---	Eucalyptus	52.8	South	13	40	No	
ALT 3	0.38-0.40	---	Eucalyptus	105.6	South	30	95	Possible	No raptors or nests observed.
ALT 3	0.42-0.45	---	Eucalyptus	158.4	East	30	80	No	Trees in very poor condition.
ALT 3	0.44	---	Eucalyptus	5.28	West	9	<20	No	
ALT 3	0.73-0.75	---	Eucalyptus	105.6	Width of ROW	30	85	Possible	No raptors or nests observed.
ALT 3	1.38-1.56	---	Eucalyptus	950.4	West	30	80	Possible	Best option for nesting (isolated); no raptors or nests observed.
ALT 3	0.44-0.45	---	Palm	52.8	West	---	<20	No	
ALT 3	0.52	---	Palm	5.28	In ROW	---	<30	No	
ALT 3	1.85	---	Palm	52.8	In ROW	---	<30	No	

Table 4.8-6 Tree Species and Locations within the Proposed Center Road Pipeline and Its Alternatives

Route	MP	Tree ID No.	Species	Maximum Linear Feet (Meters) that Could Fall Within the ROW	Relationship to Alignment	Average DBH	Average Height	Nesting Activity?	Notes
ALT 3	1.87	---	Palm	52.8	In ROW	---	<30	No	
ALT 3	1.91	---	Palm	52.8	In ROW	---	<30	No	
ALT 3	1.94	---	Palm	52.8	In ROW	---	<30	No	
ALT 3	0.43-0.44	---	Ornamental	52.8	East	8	<20	No	
ALT 3	0.47-0.50	---	Ornamental	158.4	In ROW	8	<20	No	
ALT 3	0.53	---	Ornamental	5.28	In ROW	8	<20	No	
ALT 3	0.55-0.61	---	Ornamental	316.8	In ROW	6	16	No	
ALT 3	0.67-0.68	---	Ornamental	52.8	In ROW	8	<20	No	
ALT 3	0.70	---	Ornamental	52.8	In ROW	12	40	No	
ALT 3	1.29-1.30	---	Ornamental	52.8	West	8	25	No	
ALT 3	2.00-2.01	---	Ornamental	52.8	In ROW	13	30	No	

Total number of linear feet of trees that could be removed for Alternative 3: Citrus = 2270.4 linear feet; Avocado 9028.8 linear feet; Eucalyptus 1378.08 linear feet; Palm 79.2 linear feet; and Ornamental 744.48 linear feet. The final linear distance of trees that would be removed from the ROW will be determined once the route and location within the ROW has been selected.

Note:

DBH =Diameter at breast height.

Table 4.8-7 Vegetation Communities along the Line 225 Pipeline Loop and Its Alternative

MP	MP	Line 225 Pipeline Loop	Alternative
0	1	Developed Land, Coastal Live Oak Woodland, Riversidian Sage Scrub, Non-Native Grassland	Developed Land, Coastal Live Oak Woodland, Riversidian Sage Scrub, Non-Native Grassland
1	2	Developed Land, Non-Native Grassland, Mulefat Scrub	Developed Land, Non-Native Grassland, Mulefat Scrub
2	3	Developed Land, Coastal Live Oak Woodland, Non-Native Grassland, Southern Cottonwood-Willow Riparian Forest	Developed Land, Coastal Live Oak Woodland, Non-Native Grassland, Southern Cottonwood-Willow Riparian Forest
3	4	Developed Land, Southern Cottonwood-Willow Riparian Forest	Developed Land, Southern Cottonwood-Willow Riparian Forest
4	5	Developed Land	Developed Land
5	6	Developed Land, Southern Cottonwood-Willow Riparian Forest	Developed Land, Southern Cottonwood-Willow Riparian Forest
6	7	Developed Land, Riversidian Sage Scrub, Non-Native Grassland, Valley Oak Woodland	Developed Land, Non-Native Grassland, Valley Oak Woodland
7	End	Developed Land, Riversidian Sage Scrub, Non-Native Grassland, Valley Oak Woodland	Developed Land, Riversidian Sage Scrub, Non-Native Grassland, Valley Oak Woodland

Table 4.8-8a Coast Live Oak Trees along the Line 225 Pipeline Loop

Tree	Diameter at Breast Height (inches)	Estimated Height (feet)	Health	Estimated Distance From Pipeline Centerline (feet)
1	16.8	30	Dead	40
2	22	30	Dead top 40 percent, canopy, sprouting lateral branch	40
3	12.3	30	Good	35
4	1.4	15	Good	35
5	4	15	Good	35
6	1.9	15	Good	35
7	1.9	15	Good	35
8	3.5	15	Good	35
9	5.5	15	Good	35
10	1.3	15	Good	35
11	18.5	30	20 percent dead	35
12	4.1	10	Good	35
13	3.9	15	Good	20
14	1.6	10	Good	20
15	6.7	15	Good	20
16	11.7	20	Good	30
17	4.2	5	Good	30
18	4.1	5	Good	30
19	1.8	5	Good	30
20	1.8	5	Good	30
21	1.7	5	Good	30
22	4.1	5	Good	30
23	8.3	25	Good	30
24	8.8	25	Good	30
25	8.8	25	Good	30
26	1.5	5	Good	30
27	1.9	5	Good	30
28	5	4	99 percent dead, cavity, trunk sprouts only	30
29	2.9	NA	50 percent dead	30
30	6.3	12	Good	30
31	12	20	Good, 5 percent dead canopy	25

Table 4.8-8a Coast Live Oak Trees along the Line 225 Pipeline Loop

Tree	Diameter at Breast Height (inches)	Estimated Height (feet)	Health	Estimated Distance From Pipeline Centerline (feet)
32	2	4	Good	25
33	1.9	4	Good	25
34	2.1	4.5	Good	25
35	7.8	12	Good	25
36	11.6	15	Rotten trunk with cavity	35
37	11.5	35	Good	35
38	10.2	30	Good	30
39	1.8	5	Good	30
40	11.7	25	Good	35
41	8.5	20	5 percent dead	40
42	11.2	25	Good	40
43	14.8	25	Good	30
44	8.4	20	Good	30
45	8.7	20	Good	30
46	10.4	20	5 percent dead	35
47	16	30	Good	30
48	5	3	10 percent dead	30
49	9.6	12	Good	30
50	8.4	10	Good	20
51	12.1	15	Good	20
52	9.5	6	Good	20
53	5.7	5	Cavity, rotten trunk, sprout only	20

Notes:

Survey was conducted along a north-facing slope on the south side of the ROW at the end of Via Princessa Road, between MP 1.7 and 1.9. Health was based on presence of insect or disease, canopy health and cover, and any damage such as cavity or bole rot.

Table 4.8-8b Oak Trees along the Line 225 Pipeline Loop

Location ^a	Species	Diameter at Breast Height (inches)	Estimated Height (feet)	Health	Estimated Distance From Pipeline Centerline (feet)
Area 2	VO	23.7	40	Cavity on lateral branch	75
Area 2	VO	27.5	45	Cavity on lateral branch	75
Area 3	VO	17.2	30	Good	0-20
Area 4	VO	3	12	Poor, no light	0-20
Area 4	VO	19.8	45-50	Good	0-20
Area 4	VO	11.9	15	Good	0-20
Area 4	VO	11.1	30-40	Moderate	0-20
Area 4	VO	31.1	30-41	Good	0-20
Area 5	VO	13.2	30	Good	50
Area 5	VO	12.5	30	Good	40-50
Area 5	VO	8.2	18	Good	30
Area 5	VO	9.4	25	Moderate	30
Area 5	VO	6.7	15	Moderate	20
Area 5	VO	5.6	10	60 percent dead canopy	20
Area 5	VO	9.2	20	Moderate	10-20
Area 5	VO	7.3	20	Good	10-20
Area 5	VO	9.2	20	Good	10-20
Area 5	VO	10.6	20	Good	10-20
Area 5	VO	3.4	20	Good	10-20
Area 5	VO	12.9	30	Good	20
Area 5	VO	14.5	20	Poor, trunk sprouting	30-40
Area 5	VO	7	10	Moderate, many sprouts	30-40
Area 5	VO	10.1	25	Poor	30-40
Area 5	VO	9.7	15	Moderate	30-40
Area 5	VO	1.6	5	Moderate to Poor	50
Area 5	VO	1.9	5	Moderate to Poor	50
Area 5	VO	2.4	6	Moderate to Poor	50
Area 5	VO	7.8	20	Moderate to Poor	50
Area 5	VO	6	10	Moderate to Poor	50

Notes:

VO = Valley oak (*Quercus lobata*); health was based on presence of insect or disease, canopy health and cover, and any damage such as cavity or bole rot.

^a Area 2 = MP 6.05 of the Line 225 Pipeline Loop on the south side of the ROW; Area 3 = North facing slope at MP 6.22 of the Line 225 Pipeline Loop on the south side of the ROW; Area 4 = Upper floodplain of the Santa Clara River at MP 5.85 of the Line 225 Pipeline Loop; Area 5 = North-facing slope at MP 5.95 of the Line 225 Pipeline Loop.

Table 4.8-9a Special Status Plant Species Potentially Occurring in the Vicinity of the Line 225 Pipeline Loop

Scientific Name Common Name	Listing Status	Growth Form	Flowering Period	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination (note that consultations with USFWS and NOAA Fisheries are ongoing)
Federal Listed Species Identified by the USFWS^a						
<i>Chorizanthe parryi</i> var. <i>fernandina</i> San Fernando Valley spineflower	FC, CE, CNPS 1B	annual herb	Apr-Jun	Coastal scrub in sandy areas. 150 to 1,220 m.	Has the potential to occur within Riversidian sage scrub and southern cottonwood-willow riparian forest communities in the Project area. There is a known occurrence of this species in the vicinity of Line 225 Pipeline Loop.	May affect but not likely to adversely affect
<i>Dodecahema leptoceras</i> Slender-horned spineflower	FE, CE, CNPS 1B	annual herb	Apr-Jun	Chaparral, cismontane woodland, coastal scrub on alluvial fans. Sandy sites. 200 to 760 m.	Has the potential to occur within alluvial fan sage scrub in the Project vicinity. There are historic occurrences all around the Line 225 Pipeline Loop but the species has not been seen here since 1937.	May affect but not likely to adversely affect
State Listed Species^b						
<i>Astragalus brauntonii</i> Braunton's milk-vetch	1B	perennial herb	Mar-July	Closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland/recent burns or disturbed areas, carbonate soils.	Low potential for occurrence in Project vicinity. Limited valley and foothill grassland habitat.	Not applicable
<i>Berberis nevinii</i> Nevin's barberry	FE, CE, CNPS 1B	evergreen shrub	Mar-Apr	Chaparral, cismontane woodland, coastal scrub, riparian scrub. Sandy or gravelly sites. 295 to 825 m.	Has occurred in the San Francisquito Canyon near the confluence of the Santa Clara River. Has the potential to occur within southern cottonwood-willow riparian forest, coast live oak woodland and Riversidian sage scrub communities in the Project area.	Not applicable; species not identified by the USFWS during consultation.

Table 4.8-9a Special Status Plant Species Potentially Occurring in the Vicinity of the Line 225 Pipeline Loop

Scientific Name Common Name	Listing Status	Growth Form	Flowering Period	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination (note that consultations with USFWS and NOAA Fisheries are ongoing)
<i>Calochortus clavatus</i> var. <i>gracilis</i> slender mariposa lily	CNPS 1B	perennial herb	Mar-May	Chaparral, coastal scrub. 360 to 1,000 m.	Has the potential to occur within Riversidian sage scrub communities in the Project area. Species has been documented in the vicinity of the Project area.	Not applicable
<i>Calochortus weedii</i> var. <i>vestus</i> Late-flowering mariposa lily	1B	perennial herb	May-July	Chaparral, coastal scrub.	Has the potential to occur within Riversidian sage scrub communities in the Project area.	Not applicable
<i>Calochortus plummerae</i> Plummer's mariposa lily	CNPS 1B	perennial herb	May-Jul	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley, and foothill grassland. Granitic, rocky sites. 100 to 1,700 m.	Has the potential to occur within Riversidian sage scrub and oak woodland communities in the Project area. There are historic occurrences of this species in the vicinity of the Line 225 Pipeline Loop.	Not applicable
<i>Calystegia peirsonii</i> Peirson's morning-glory	CNPS 4	perennial herb	May-June	Chaparral, coastal scrub.	Species has been documented in the vicinity of the Project area.	Not applicable
<i>Centromadia parryi</i> ssp. <i>Australis</i> Southern tarplant	1B	deciduous shrub	July-Nov	Coastal scrub and sandstone rocky outcrops.	No suitable habitat occurs within the Project area.	Not applicable
<i>Deinandra minthornii</i> Santa Susana tarplant	CR 1B	deciduous shrub	July-Nov	Coastal scrub and sandstone rocky outcrops.	No suitable habitat occurs within the Project area.	Not applicable
<i>Delphinium parryi</i> ssp. <i>blockmaniae</i> Dune larkspur	1B	perennial herb	April-May	Maritime chaparral, coastal dunes.	Species documented in the vicinity of the Project area.	Not applicable

Table 4.8-9a Special Status Plant Species Potentially Occurring in the Vicinity of the Line 225 Pipeline Loop

Scientific Name Common Name	Listing Status	Growth Form	Flowering Period	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination (note that consultations with USFWS and NOAA Fisheries are ongoing)
<i>Dudleya blochmaniae</i> ssp. <i>Blochmaniae</i> Blochman's dudleya	FC 1B	annual herb	April-June	Coastal bluff scrub/scrub, serpentine soils	Low potential for occurrence within Project area.	Not applicable; species not identified by the USFWS during consultation.
<i>Dudleya multicaulis</i> Many-stemmed dudleya	FC 1B	perennial herb	May-July	Chaparral, coastal scrub and grasslands	Low potential for occurrence within Project area.	Not applicable; species not identified by the USFWS during consultation.
<i>Dudleya parva</i> Conejo dudleya	FT 1B	perennial herb	May-July	Chaparral, coastal scrub	No suitable habitat within Project area.	Not applicable; species not identified by the USFWS during consultation.
<i>Harpagonella palmeri</i> var. <i>Palmeri</i> Palmer's grappling hook	CNPS 4	annual herb	Mar-April	Chaparral, coastal scrub, valley, and foothill grasslands.	Species documented in the vicinity of the Project area.	Not applicable
<i>Helianthus nuttallii</i> ssp. <i>parishii</i> Los Angeles sunflower	CNPS 1A	perennial herb	Aug-Oct	Coastal saltwater and freshwater marshes and swamps. 10 to 1,675 m.	Unlikely to occur; suitable habitat for this species does not occur within the Project area. This species was presumed extinct until a single population was discovered near the mouth of the Santa Clara River in 2002. This species is not discussed further.	Not applicable
<i>Erodium macrophyllum</i> Round-leaved filaree	CNPS 2	annual herb	Mar-May	Woodland and valley and foothill grasslands.	Low potential. Limited habitat within Project area.	Not applicable
<i>Juglans californica</i> var. <i>Californica</i> Southern California black walnut	CNPS 4	Tree	N/A	Chaparral, woodlands, and coastal scrub.	Species documented in the vicinity of the Project area.	Not applicable

Table 4.8-9a Special Status Plant Species Potentially Occurring in the Vicinity of the Line 225 Pipeline Loop

Scientific Name Common Name	Listing Status	Growth Form	Flowering Period	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination (note that consultations with USFWS and NOAA Fisheries are ongoing)
<i>Malacothamnus davidsonii</i> Davidson's bush mallow	1B	deciduous shrub	June-Jan	Chaparral, woodlands, coastal sage scrub, riparian woodland.	Suitable habitat within Project vicinity.	Not applicable
<i>Nolina cismontana</i> Chaparral nolina	1B	evergreen shrub	April-June	Chaparral, coastal scrub.	Low potential for occurrence. Limited habitat within Project area.	Not applicable
<i>Opuntia basilaris</i> var. <i>brachyclada</i> Short-joint beavertail	CNPS 1B	shrub (succulent stem)	Apr-Jun	Chaparral, Joshua tree woodland, Mohavean desert scrub, pinyon and juniper woodland. 425 to 1,800 m.	Has the potential to occur based on known occurrences of this species along the Line 225 Pipeline Loop near MP 0.0.	Not applicable
<i>Orcuttia californica</i> California Orcutt grass	FE, CE, CNPS 1B	annual herb	Apr-Aug	Vernal pools. 15 to 660 m.	Has the potential to occur based on known occurrences in the Santa Clarita Valley. Occurs within vernal pools, but no vernal pools are within in the Project area. Not discussed further in this report.	Not applicable; species not identified by the USFWS during informal consultation.
<i>Pentachaeta lyonii</i> Lyon's pentachaeta	FE CE 1B	annual herb	Mar-Aug	Chaparral, coastal scrub, valley and foothill grassland.	Low potential for occurrence. Limited habitat within Project area.	Not applicable; species not identified by the USFWS during informal consultation.
<i>Perideridia pringlei</i> Pringle's yampah	CNPS 4	perennial herb	April-Aug	Chaparral, woodland, coastal scrub, and pinyon and juniper woodlands.	Low potential for occurrence. Limited habitat within Project area.	Not applicable

Table 4.8-9a Special Status Plant Species Potentially Occurring in the Vicinity of the Line 225 Pipeline Loop

Scientific Name Common Name	Listing Status	Growth Form	Flowering Period	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination (note that consultations with USFWS and NOAA Fisheries are ongoing)
<i>Senecio aphanactis</i> rayless ragwort	CNPS 2	annual herb	Jan-Apr	Chaparral, cismontane woodland, coastal scrub. Occurs in alkaline soils. 15 to 800 m.	Has the potential to occur in oak woodland and Riversidian sage scrub communities in the Project area. There is a known occurrence of this species along the Line 225 Pipeline Loop between MP 2.0 and 5.0.	Not applicable

^a USFWS 2005.^b CDFG 2004a.**Notes:**

Status codes are derived CDFG and CNPS.

FC = Federal candidate species for listing; FT = Federally listed as threatened; FE = Federally listed as endangered; CR = Listed by California as Rare; CE = Listed by California as endangered; CNPS = California Native Plant Society

1A = Presumed extinct in California.

1B = Rare, threatened, or endangered in California and elsewhere.

2 = Rare in California but more common elsewhere.

4 = Plant of limited distribution - a watch list.

Table 4.8-9b Special Status Wildlife Species Potentially Occurring in the Vicinity of the Line 225 Pipeline Loop

Scientific Name Common Name	Listing Status	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination (note that consultations with USFWS and NOAA Fisheries are ongoing)
Federal Listed Species Identified by USFWS^a				
<i>Gasterosteus aculeatus williamsoni</i> Unarmored threespine stickleback	FE, CE, CFP	Weedy pools, backwaters, and among emergent vegetation at the stream edge in small Southern California streams.	Potential to occur at pipeline crossings in the Santa Clara River, South Fork Santa Clara River, and San Francisquito Creek.	May affect but not likely to adversely affect
<i>Oncorhynchus mykiss</i> Steelhead trout (Southern California ESU)	FE, CSC	Streams, rivers with cool water, deep pools, and gravelly substrate.	Steelhead have not been identified in the Santa Clara River east of Piru Creek.	Not likely to adversely affect

Table 4.8-9b Special Status Wildlife Species Potentially Occurring in the Vicinity of the Line 225 Pipeline Loop

Scientific Name Common Name	Listing Status	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination (note that consultations with USFWS and NOAA Fisheries are ongoing)
<i>Bufo californicus</i> Arroyo toad	FE, CSC	Found in riparian habitats with sandy streambeds, with cottonwood, sycamore, and willow trees adjacent to shallow pools where the toad may sit in the water while partially exposed above.	Potential to occur at pipeline crossings in the Santa Clara River, South Fork Santa Clara River, and San Francisquito Creek. An individual has been found at the Santa Clara River east of Interstate 5.	May affect but not likely to adversely affect
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	FC, CE	Nesting along river systems with riparian vegetation.	Potential to occur within the Project area. Species has been documented in the Project area.	May affect but not likely to adversely affect
<i>Empidonax traillii extimus</i> Southwestern willow flycatcher	FE, CE	Riparian woodlands with water and low willow thickets.	Low potential to occur within the Project area.	May affect but not likely to adversely affect
<i>Polioptila californica</i> Coastal California gnatcatcher	FT, CSC	Coastal sage scrub in areas with flat or sloping terrain.	Potential to occur within the Project area.	May affect but not likely to adversely affect
<i>Vireo bellii pusillus</i> Least Bell's vireo	FE, CE	Nests in Southern California during summer in low riparian areas in vicinity of water or in dry river bottoms; below 2,000 ft. (610 m). Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, mulefat, and mesquite.	Potential to occur within southern cottonwood willow riparian forest within the Project area at the Santa Clara River, South Fork Santa Clara River, and San Francisquito Creek. Reported from Project vicinity in a streambed supporting sycamores and other shrubs.	May affect but not likely to adversely affect
State Listed Species^b				
Insects				
<i>Plebulina emigdionis</i> San Emigdio blue butterfly	FSC	Streambeds, washes, or alkaline areas. Associated with <i>Atriplex canescens</i> .	Potential to occur within the Project area near the Santa Clara River, South Fork Santa Clara River, and San Francisquito Creek.	Not applicable
Freshwater Fish				
<i>Gila orcutti</i> Arroyo chub	CSC	Slow water stream sections with mud or sand bottoms. Feed heavily on aquatic vegetation and associated invertebrates.	Potential to occur at pipeline crossings in the Santa Clara River, South Fork Santa Clara River, and San Francisquito Creek.	Not applicable

Table 4.8-9b Special Status Wildlife Species Potentially Occurring in the Vicinity of the Line 225 Pipeline Loop

Scientific Name Common Name	Listing Status	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination (note that consultations with USFWS and NOAA Fisheries are ongoing)
<i>Catostomus santaanae</i> Santa Ana sucker	FT, CSC	Endemic to Los Angeles Basin south coastal streams. Populations in the Santa Clara River watershed are not listed under the Federal ESA.	Potential to occur at pipeline crossings in the Santa Clara River, South Fork Santa Clara River, and San Francisquito Creek.	Not applicable; species not identified by the USFWS during consultation.
Amphibians				
<i>Rana aurora draytonii</i> California red-legged frog	FT, CSC, CP	Needs habitat with permanent water sources.	Low potential to occur within Project area.	Not applicable; species not identified by the USFWS during consultation.
<i>Spea hammondi</i> Western spadefoot	FSC, CSC	Occurs primarily in grassland situations, but occasional populations also occur in valley-foothill hardwood woodlands. Vernal pools essential for breeding and egg-laying.	Potential to occur at pipeline crossings in the Santa Clara River, South Fork Santa Clara River, and San Francisquito Creek. Species documented in the vicinity of the Project area.	Not applicable
<i>Taricha torosa torosa</i> Coast range newt	CSC	Grasslands and woodlands; breeds in ponds with slow flowing water.	Low potential to occur within Project area. Limited flow within Santa Clara River, South Fork Santa Clara River, and San Francisquito Creek.	Not applicable
Reptiles				
<i>Anniella pulchra pulchra</i> Silvery legless lizard	FSC, CSC	Dry washes, pine, oak, and riparian woodlands, chaparral.	Potential for occurrence within the non-developed areas of the Line 225 Pipeline Loop.	Not applicable
<i>Clemmys marmorata pallida</i> Southwestern pond turtle	FSC, CSC, CP	Streams, ponds, freshwater marshes, and lakes.	Potential to occur within riverbeds.	Not applicable
<i>Phrynosoma coronatum blainvillei</i> San Diego horned lizard	CSC	Inhabits coastal sage scrub and chaparral in arid and semi-arid climate conditions. Prefers rocky or shallow sandy soils.	Potential for occurrence within the non-developed areas of the Line 225 Pipeline Loop.	Not applicable
<i>Phrynosoma coronatum frontale</i> California horned lizard	FSC, CSC, CP	Riparian woodlands, chaparral, and annual grasslands.	Potential for occurrence within the non-developed areas of the Line 225 Pipeline Loop.	Not applicable

Table 4.8-9b Special Status Wildlife Species Potentially Occurring in the Vicinity of the Line 225 Pipeline Loop

Scientific Name Common Name	Listing Status	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination (note that consultations with USFWS and NOAA Fisheries are ongoing)
<i>Thamnophis hammondi</i> Two-striped garter snake	FSC, CSC, CP	Perennial and intermittent streams with rocky or sandy beds with dense riparian vegetation.	Potential to occur within the Santa Clara River.	Not applicable
Birds				
<i>Accipiter cooperi</i> Cooper's hawk	CSC	Stands of live oak and riparian woodlands.	Potential to occur within the Project area. Species has been documented in the area.	Not applicable
<i>Accipiter cooperi</i> Sharp-shinned hawk	CSC	Woodlands, chaparral, and scrub/shrub habitat.	Potential to occur within the Project vicinity. Species has been documented in the Project area.	Not applicable
<i>Agelaius tricolor</i> Tricolored blackbird	FSC, CSC	Freshwater wetlands and riparian scrub.	Potential to occur within the Project area. Species has been documented in the Project area.	Not applicable
<i>Aimophila ruficeps canescens</i> Southern California rufous-crowned sparrow	FSC, CSC	Coastal sage scrub.	Potential to occur within the Project area. Species has been documented in the Project area.	Not applicable
<i>Amphispiza belli belli</i> Bell's sage sparrow	FSC, CSC	Saltbush scrub and chaparral.	Potential to occur within the Project area. Species has been documented in the Project area.	Not applicable
<i>Athene cunicularia hypugea</i> Western burrowing owl	FSC, CSC	Grasslands and open areas with sparse vegetation.	Potential to occur within the Project area.	Not applicable
<i>Aquila chrysaetos</i> Golden eagle	CSC, CFP	Open habitat, mountains, and deserts.	Potential for occurrence is low, and nesting habitat is limited.	Not applicable
<i>Asio otus</i> Long-eared owl	CSC	Riparian and live oak areas with dense vegetation.	Low potential to occur within the Project area.	Not applicable
<i>Buteo regalis</i> Ferruginous hawk	FSC, CSC	Grasslands, agricultural fields, and scrub habitat.	Low potential to occur within the Project area.	Not applicable
<i>Circus cyaneus</i> Northern harrier	CSC	Freshwater wetlands, grasslands, and agricultural fields.	Potential to occur within the Project area.	Not applicable
<i>Dendroica petechia brewsteri</i> Yellow warbler	CSC	Riparian and woodland habitat.	Species has been observed within the Project area.	Not applicable

Table 4.8-9b Special Status Wildlife Species Potentially Occurring in the Vicinity of the Line 225 Pipeline Loop

Scientific Name Common Name	Listing Status	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination (note that consultations with USFWS and NOAA Fisheries are ongoing)
<i>Elanus leucurus</i> White-tailed kite	CFP	Open vegetation; uses woodland areas for cover.	Species has been documented nesting in the Project area.	Not applicable
<i>Eremophila alpestris actia</i> California horned lark	CSC	Grasslands, disturbed areas, and agricultural fields.	Potential to occur within the Project area.	Not applicable
<i>Falco columbarius</i> Merlin	CSC	Wetlands, woodlands, agricultural fields, and grasslands.	Potential to occur within the Project area.	Not applicable
<i>Falco mexicanus</i> Prairie falcon	CSC	Grasslands, agricultural fields, scrub habitat, cliff faces.	Low potential to occur within the Project area.	Not applicable
<i>Icteria virens</i> Yellow-breasted chat	CSC	Riparian and woodland habitat with dense understory vegetation.	Low potential to occur within the Project area.	Not applicable
<i>Lanius ludovicianus</i> Loggerhead shrike	FSC, CSC	Grasslands with pockets of shrubs, trees, fences or other rooting sites.	Species documented within the Project area.	Not applicable
<i>Piranga rubra</i> Summer tanager	CSC	Cottonwood-willow riparian habitat along rivers and streams.	Potential to occur within the Project area; Santa Clara River. Species has been observed in the area.	Not applicable
<i>Riparia riparia</i> Bank swallow	CT	Nest in riparian and lowland habitats.	Low potential to occur within the Project area.	Not applicable
Mammals				
<i>Antrozous pallidus</i> Pallid bat	CSC	Arid habitats such as grasslands, shrublands, woodlands, and rocky outcrops, cliffs.	Potential to occur within the Project area. Species has been documented in the Project area.	Not applicable
<i>Bassariscus astutus</i> Ringtail	CFP	Shrubland habitats in rocky areas or riparian habitats.	Low potential to occur within the Project area.	Not applicable
<i>Corynorhinus townsendii pallescens</i> Pale big-eared bat	FSC, CSC	Habitats include conifer and oak woodlands, grasslands, and high elevation forests and meadows.	Potential to occur along the Santa Clara River.	Not applicable
<i>Felis concolor browni</i> Mountain lion	CSC	Occurs in a variety of habitat such as scrub and forested habitats.	The Santa Clara River is a known corridor for the species and has been observed within the Project area.	Not applicable

Table 4.8-9b Special Status Wildlife Species Potentially Occurring in the Vicinity of the Line 225 Pipeline Loop

Scientific Name Common Name	Listing Status	General Habitat Characteristics	Potential to Occur in Project Area	Section 7 Determination (note that consultations with USFWS and NOAA Fisheries are ongoing)
<i>Euderma maculata</i> Spotted bat	FSC, CSC	Deserts, scrublands, chaparral, and woodland habitats.	Potential to occur within the Project area. Species has been documented in the Project area.	Not applicable
<i>Eumops perotis</i> Western mastiff bat	FSC, CSC	Arid lowlands and coastal basins with rocky terrain with crevices for day-roosts.	Low potential to occur within the Project area.	Not applicable
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	FSC, CSC	Chaparral and coastal sage scrub.	Potential to occur within the Project area. Species has been documented in the Project area.	Not applicable
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	CSC	Chaparral and coastal sage scrub.	Potential to occur within the Project area. Species has been documented in the Project area.	Not applicable

^a USFWS 2005.^b CDFG 2004.**Notes:**

FE = Federally listed as endangered; FT = Federally listed as threatened; FD = Federally de-listed; FSC = Federal species of concern; CE = State listed as endangered; CT = State listed as threatened; CSC = California species of concern; CFP = California Fully Protected; CP = California Protected

Table 4.8-12 Potential Impact on Federal Listed Species on Alternative Pipeline Routes

Species	Section 7 Determination	Applicable Mitigation Measures (see Section 4.8.4)
Center Road Pipeline Alternatives 1, 2, and 3 (Inland Portion of ROW)		
Ventura marsh milk-vetch	No effect	NA
Salt marsh bird's beak	No effect	NA
Tidewater goby	No effect	NA
Southern California steelhead ESU	No effect	NA
Western snowy plover	No effect	NA
Coastal California gnatcatcher	No effect	NA
Brown pelican	No effect	NA
Light-footed clapper rail	No effect	NA
California least tern	No effect	NA
Least Bell's vireo	No effect	NA
Santa Barbara Channel Alternative/Mandalay Shore Crossing/Gonzales Road Pipeline		
Ventura marsh milk-vetch	Likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM

Table 4.8-12 Potential Impact on Federal Listed Species on Alternative Pipeline Routes

Species	Section 7 Determination	Applicable Mitigation Measures (see Section 4.8.4)
		TerrBio-2e
Salt marsh bird's beak	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e
Tidewater goby	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM WAT-6b; MM TerrBio-3a
Southern California steelhead ESU	No effect	NA
Western snowy plover	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM WAT-6b; MM TerrBio-3a and compliance with nesting season work window
Coastal California gnatcatcher	No effect	NA
Brown pelican	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM TerrBio-2f; AM TerrBio-2g; MM TerrBio-3a and compliance with nesting season work window
Light-footed clapper rail	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM TerrBio-2f; AM TerrBio-2g; MM TerrBio-3a and compliance with nesting season work window
California least tern	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM TerrBio-2f; AM TerrBio-2g; MM TerrBio-3a and compliance with nesting season work window
Least Bell's vireo	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM TerrBio-2f; AM TerrBio-2g; MM TerrBio-3a and compliance with nesting season work window
Arnold Road Shore Crossing/Arnold Road Pipeline		
Ventura marsh milk-vetch	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e
Salt marsh bird's-beak	Likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e
Tidewater goby	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM WAT-6b; MM TerrBio-3a
Southern California steelhead ESU	No effect	NA
Western snowy plover	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM

Table 4.8-12 Potential Impact on Federal Listed Species on Alternative Pipeline Routes

Species	Section 7 Determination	Applicable Mitigation Measures (see Section 4.8.4)
		TerrBio-2e; AM WAT-6b; MM TerrBio-3a and compliance with nesting season work window
Coastal California gnatcatcher	No effect	NA
Brown pelican	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM TerrBio-2f; AM TerrBio-2g; MM TerrBio-3a and compliance with nesting season work window
Light-footed clapper rail	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM TerrBio-2f; AM TerrBio-2g; MM TerrBio-3a and compliance with nesting season work window
California least tern	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM TerrBio-2f; AM TerrBio-2g; MM TerrBio-3a and compliance with nesting season work window
Least Bell's vireo	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM TerrBio-2f; AM TerrBio-2g; MM TerrBio-3a and compliance with nesting season work window
Point Mugu Shore Crossing/Casper Road Pipeline		
Ventura marsh milk-vetch	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e
Salt marsh bird's-beak	Likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e
Tidewater goby	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM WAT-6b; MM TerrBio-3a
Southern California steelhead ESU	No effect	NA
Western snowy plover	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM WAT-6b; MM TerrBio-3a and compliance with nesting season work window
Coastal California gnatcatcher	No effect	NA
Brown pelican	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM TerrBio-2f; AM TerrBio-2g; MM TerrBio-3a and compliance with nesting season work window
Light-footed clapper rail	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM

Table 4.8-12 Potential Impact on Federal Listed Species on Alternative Pipeline Routes

Species	Section 7 Determination	Applicable Mitigation Measures (see Section 4.8.4)
		TerrBio-2e; AM TerrBio-2f; AM TerrBio-2g; MM TerrBio-3a and compliance with nesting season work window
California least tern	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM TerrBio-2f; AM TerrBio-2g; MM TerrBio-3a and compliance with nesting season work window
Least Bell's vireo	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM TerrBio-2f; AM TerrBio-2g; MM TerrBio-3a and compliance with nesting season work window
Line 225 Pipeline Loop Alternative		
Unarmored threespine stickleback	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM TerrBio-2f; AM TerrBio-2g; AM WAT-6b
Coastal California gnatcatcher	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM TerrBio-2f; AM TerrBio-2g; MM TerrBio-3a and compliance with nesting season work window
Arroyo toad	Not likely to adversely affect	AM TerrBio-2a; AM TerrBio-2b; AM TerrBio-2c; AM TerrBio-2d; AM TerrBio-2e; AM TerrBio-2f; AM TerrBio-2g; MM TerrBio-3a; AM WAT-6b

Note: Consultations with USFWS and NOAA Fisheries are ongoing.

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